

THE PANAMA CANAL RECORD

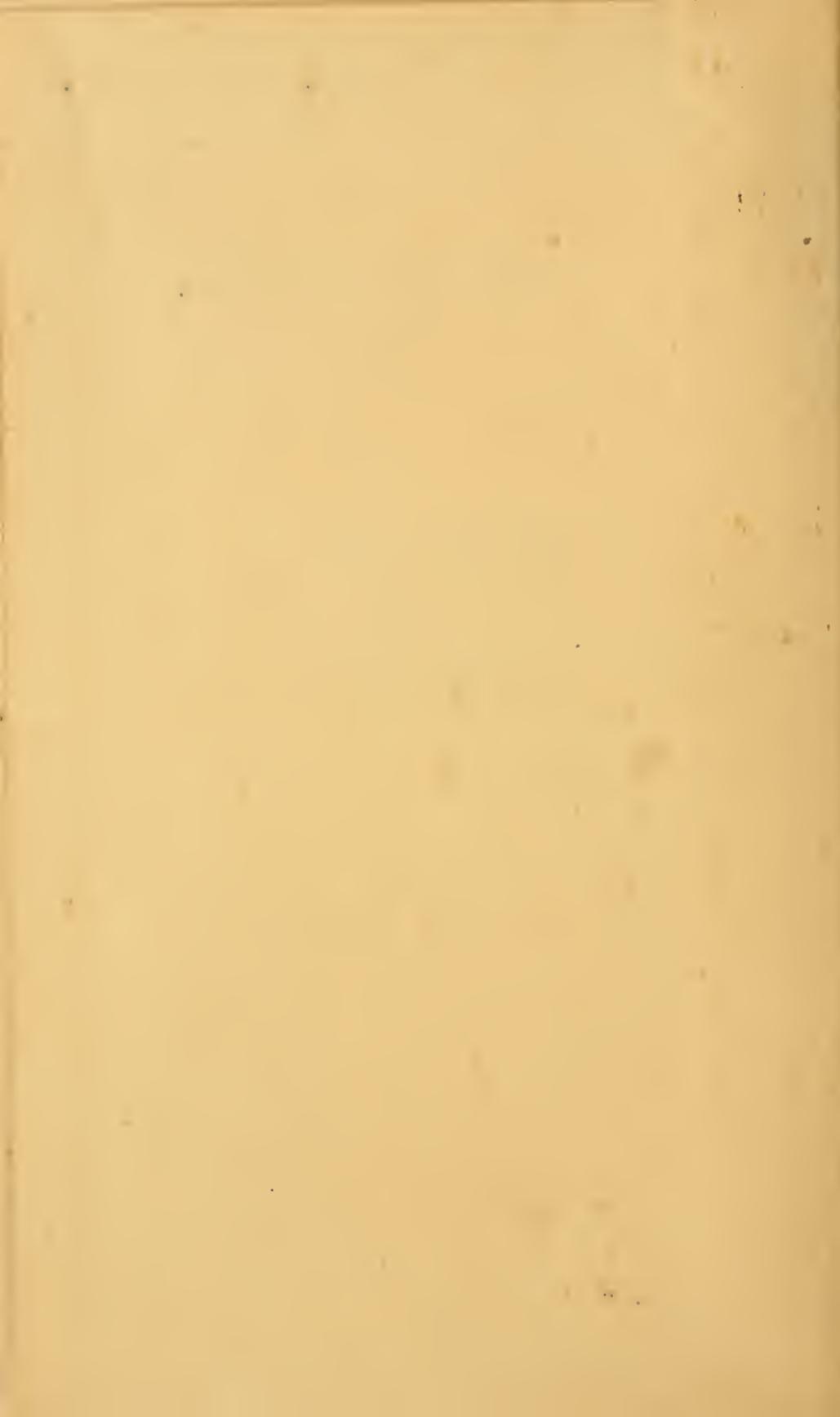
VOLUME 24

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THE PANAMA CANAL RECORD

PUBLISHED WEEKLY UNDER
THE AUTHORITY AND SUPER-
VISION OF THE PANAMA CANAL

AUGUST 6, 1930, TO JULY 29, 1931

VOLUME XXIV
WITH INDEX

THE PANAMA CANAL
BALBOA HEIGHTS, CANAL ZONE
1931

THE PANAMA CANAL PRESS
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1931

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Volume XXIV. Balboa Heights, C. Z., August 6, 1930. No. 1.

Canal Traffic During July.

During the month of July, 1930, 488 commercial vessels and 10 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,180,511.82 and on the launches \$64.95, or a total tolls collection of \$2,180,576.77.

The daily average of commercial vessels was 15.74 and the average tolls collection was \$70,341.19, as compared with 15.93 and \$70,033.15 for the previous month, and an average of 17.00 transits and \$72,889.75 for July, 1929. The average amount of tolls paid by each of the commercial transits was \$4,468.23, as compared with \$4,395.39 for the month of June, 1930.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 7 months of the current calendar year, with the daily averages of transits and tolls, together with the totals for the first 7 months of the calendar years 1929 and 1928:

	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January.....	531	\$2,360,211.24	17.13	\$76,135.84
February.....	491	2,131,386.12	17.54	76,120.93
March.....	515	2,260,002.36	16.61	72,903.30
April.....	489	2,232,763.00	16.30	74,425.43
May.....	479	2,162,898.60	15.45	69,770.92
June.....	478	2,100,994.53	15.93	70,033.15
July.....	488	2,180,576.77	15.74	70,341.19
Total, first 7 months of calendar year 1930.....	3,471	15,428,832.62	16.37	72,777.51
Total, first 7 months of calendar year 1929.....	3,755	16,023,664.05	17.71	75,583.32
Total, first 7 months of calendar year 1928.....	3,658	15,121,750.37	17.17	70,994.13

As compared with the first 7 months of the calendar year 1929, the corresponding period this year has had 284 fewer transits and \$594,831.43 less tolls.

Earthquake.

An earthquake in the afternoon of July 30, 1930, which was felt generally in the Canal Zone was reported upon by the Chief of Surveys in a memorandum for THE PANAMA CANAL RECORD as follows:

A heavy local seismic disturbance began 1: 51: 59 p. m. and ended 1: 57: 30 p. m., July 30, 1930. Two shocks were noticed, the first giving a low explosive-like sound. Distance and direction of epicenter was about 75 miles, probably to the southwest. Intensity V or VI; was generally felt over the Isthmus, the more so on Pacific side. No material damage. Telephone department reports "doors" on switch-board generally dropped. Some small plaster cracks on buildings. Quake in general like the one on March 7, 1930, and about same intensity. No special damage known in the interior, authority of Panama Telegraph Company, though quake was generally noticed by inhabitants.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, August 2, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Missourian ²	26	18.18	27	6.15	27	12.52	27	14.30	American.	Amer.-Hawaiian Line.	443.1	59.8	20.5	Boston, Mass.	Portland, Oreg.	General.	3,292	8,567	6,020
Pear Branch ²	26	23.20	27	6.20	27	13.12	27	14.30	British.	F. & W. Ritson.	398.6	53.8	20.0	N. Shields, Eng.	Corral, Chile.	General.	1,573	5,760	3,866
Sidney M.	27	3.05	27	7.20	27	14.05	27	15.25	American.	Munson, McCork' Line.	401.0	53.2	20.0	Baltimore, Md.	Tacoma, Wash.	Gen., steel, wire.	4,765	7,082	5,167
Chester Sun ²	27	9.00	27	9.10	27	16.07	27	17.10	American.	Sun Oil Co.	480.0	66.0	21.11	Chester, Pa.	Los Angeles, Calif.	Ballast.	9,607	6,548	6,548
Hanley	27	10.45	27	10.55	27	17.48	27	21.55	American.	Norton, Lilly & Co.	440.0	56.0	23.0	Baltimore, Md.	Portland, Oreg.	General.	6,576	8,310	6,005
Beayer	26	21.55	27	11.15	27	18.35	27	19.40	German.	Hamburg-American Line	409.0	53.0	19.6	Hamburg, Germany	Valparaiso, Chile.	General.	3,220	7,173	5,504
Ehrhart ²	27	3.30	27	13.10	27	19.40	28	00.27	German.	North German Lloyd	360.0	51.0	17.1	Bremen, Germany	Champerico, Guat.	General.	1,763	5,038	3,533
Stealge	27	19.50	27	20.00	28	9.00	28	10.06	American.	Jishman S. S. Lines	395.5	55.0	26.0	New York, N. Y.	Vancouver, B. C.	Steel, general.	7,074	7,330	5,245
Bohvar ²	27	15.50	27	16.00	27	13.25	27	14.25	American.	U. S. Parker.	225.0	41.0	.....	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	.....	.....	6
Ashville ²	17	15.50	28	6.00	28	13.25	28	14.25	American.	U. S. Navy	.....	.....	.....	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	.....	.....	6
Alphabon	27	16.10	28	6.00	28	12.55	29	11.50	Norwegian.	Fred Olsen & Co.	435.0	56.0	18.8	Oslo, Norway	Vancouver, B. C.	General.	3,350	8,005	5,653
Lincoln ²	27	20.25	28	6.10	28	14.03	28	19.10	Norwegian.	Westfal, Larsen & Co.	398.0	54.9	22.0	Santos, Brazil.	Vancouver, B. C.	General.	3,837	8,894	5,124
Bassett City ²	28	7.40	28	8.05	28	13.18	28	16.35	American.	Norton, Lilly & Co.	424.2	56.2	26.0	Chicago, Ill.	Hongkong, China.	General.	6,646	7,611	5,450
Cutterman	26	17.40	29	5.55	29	14.11	29	23.25	American.	U. S. Navy	.....	.....	.....	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	.....	.....	6
Caldas ²	26	17.40	29	5.55	29	14.11	29	23.25	Colombian.	National Navigation Co.	116.0	21.0	8.6	Cristobal, C. Z.	Buena Ventura, Col.	General.	125	211	124
British	29	7.00	29	7.30	29	14.12	29	15.55	British.	Pet. Storage & Fin. Corp.	440.2	57.0	19.0	London, England	Los Angeles, Calif.	Ballast.	.....	.....	.....
Governor ²	29	1.05	29	8.40	29	15.21	29	16.20	American.	Quaker Line.	410.5	54.3	19.3	Philadelphia, Pa.	Seattle, Wash.	General.	3,175	6,572	4,000
San Vincente.	29	8.05	29	9.10	29	17.08	29	18.25	American.	Nelson Line.	324.0	46.2	22.0	New York, N. Y.	Seattle, Wash.	General.	2,500	3,983	2,631
Plov City	28	16.10	29	10.20	29	16.41	30	17.40	American.	Panama Mail S. S. Co.	380.0	48.7	23.0	New York, N. Y.	San Francisco, Cal.	General.	2,864	6,033	4,353
Venezuela	29	18.30	29	20.15	30	9.03	30	11.00	American.	Amer.-Hawaiian Line	404.6	56.0	16.3	Boston, Mass.	Seattle, Wash.	General.	2,463	6,756	4,775
Montanan	29	18.50	30	6.10	30	12.35	30	15.35	British.	Anglo-American Oil Co.	420.0	57.8	19.0	Birmingham, Eng.	Los Angeles, Calif.	Ballast.	.....	.....	.....
Clydefield ²	29	22.25	30	6.12	30	13.29	30	15.00	Dutch.	Anglo-Saxon Pet. Co.	412.0	58.2	21.0	Helmingfors, Finl'd	Los Angeles, Calif.	Ballast.	.....	.....	.....
Senramis ²	29	25.30	30	8.00	30	14.27	30	15.35	American.	Sun Oil Co.	480.6	66.0	21.0	New York, N. Y.	Long Beach, Calif.	Ballast.	.....	.....	.....
Pacific Sun ²	30	7.45	30	8.00	30	15.33	31	2.29	American.	Grace Line.	360.3	51.7	22.0	New York, N. Y.	Talcahuano, Chile.	General.	1,539	5,957	4,325
Santa Elisa	29	16.15	30	9.05	30	16.40	30	18.00	American.	Ore S. S. Corp.	550.3	72.2	21.0	Baltimore, Md.	Cruz Grande, Chile	Ballast.	.....	.....	.....
Bethore.	29	23.15	30	9.55	30	16.40	30	18.00	American.	Ore S. S. Corp.	550.3	72.2	21.0	Baltimore, Md.	Cruz Grande, Chile	Ballast.	.....	.....	.....
Katrina	30	9.05	30	10.35	30	17.20	30	18.25	American.	Lukenbach Line.	446.0	56.0	22.0	Boston, Mass.	Tacoma, Wash.	General.	3,989	8,508	6,179
Lukenbach.	30	10.55	30	11.25	30	18.17	30	22.47	British.	Imperial Oil Co.	470.0	63.2	23.6	Montreal, Canada.	Talara, Peru.	Ballast.	.....	.....	.....
Ontario ¹	18	14.15	30	12.10	30	18.52	30	20.00	American.	Panama Mail S. S. Co.	296.1	45.0	17.7	Cristobal, C. Z.	San Francisco, Cal.	General.	1,300	3,848	2,606
Francisco ²	30	15.25	30	15.40	30	22.05	30	23.31	American.	Standard Oil Co.	468.3	62.7	19.6	Boston, Mass.	Los Angeles, Calif.	Ballast.	.....	.....	.....
Dixie Arrow ²	30	6.00	31	6.05	31	16.02	31	17.25	American.	U. S. Navy	600.0	97.0	.....	New York, N. Y.	Los Angeles, Calif.	Ballast.	.....	.....	.....
Mississippi ²	29	19.45	31	6.05	31	13.08	31	14.35	American.	Union Oil Co.	460.0	60.0	20.6	Cristobal, C. Z.	Los Angeles, Calif.	Ballast.	.....	.....	.....
Santa Maria ²	31	00.40	31	7.15	31	14.05	31	16.30	American.	Sun Oil Co.	480.6	66.0	22.0	Chester, Pa.	Los Angeles, Calif.	Ballast.	.....	.....	.....
Sun ²	31	00.40	31	7.15	31	14.05	31	16.30	American.	Sun Oil Co.	480.6	66.0	22.0	Chester, Pa.	Los Angeles, Calif.	Ballast.	.....	.....	.....

¹ Tanker. ² Motor ship. ³ Launch. ⁴ Gunboat. ⁵ Battleship.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Salt		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Beam.	water draft.			Nature.	Tons.	Gross.	Net.
Astral ¹	29	13	05	29	13	57	29	22	05	American	Standard Transp. Co.	439.5	58.0	29.0	New York, N. Y.	Light fuel distil.	10,241	8,913	6,210
Chawian	29	15	06	29	14	06	29	21	25	American	Amer.-Hawaian Line	404.0	53.9	23.0	Boston, Mass.	General	4,369	6,760	4,767
Christiesoon	29	15	35	29	16	28	29	23	45	American	Arrow Line	409.7	54.2	24.0	Boston, Mass.	Lumber	6,731	6,603	4,915
Bodden No. 2 ¹	30	12	30	30	12	32	29	21	32	American	O. V. Bodden	48.3	12.8	13.0	Cristobal, C. Z.	General	855	1,105	643
Calli	30	15	00	30	13	33	30	10	40	German	Roland Line	216.5	32.9	13.0	Cristobal, C. Z.	General	6,861	6,205	4,284
Barth Kellogg	30	15	00	30	16	19	31	11	35	American	Kellogg S. S. Corp.	390.0	54.2	23.0	New York, N. Y.	Coconut oil	6,307	5,710	4,011
M. Salvador	30	18	00	30	16	17	31	13	08	American	Panama Mail S. S. Co.	360.2	51.0	22.0	New York, N. Y.	General, coffee	1,897	5,710	4,011
Nedome	30	22	50	31	6	29	31	14	10	Danish	A. P. Moller	374.8	52.0	20.0	Port Limon, P. I.	Sugar, lumber	4,451	5,998	4,483
Marsk ¹¹	31	3	30	31	7	16	31	14	05	Italian	S. Calasfrini De Luca	365.9	61.5	24.3	Genoa, Italy	General	1,198	1,977	9,372
Orato ¹¹	31	3	30	31	7	55	31	16	05	British	Factie Steam Nav. Co.	290.1	41.7	13.0	Champerico, Guat.	General	276	2,597	1,587
Matthew	31	7	35	31	8	13	31	15	05	American	Luckenbach Line	434.3	57.7	23.0	Portland, Ore.	General	4,580	7,977	5,764
Luckenbach	31	8	50	31	10	15	31	18	35	Norwegian	Caucasian Oil Co.	328.3	55.3	25.0	Avonmouth, Eng.	Gasoline	8,569	6,425	4,976
Clur, Th. Boe ¹⁴	31	12	30	31	14	08	31	21	22	British	Danielsen Bros., Ltd.	327.0	53.7	25.0	Victoria, B. C.	Gen., fresh fruit	5,715	6,719	4,978
Modava	31	12	35	31	15	28	31	19	30	British	Ben Line, Ltd.	529.0	54.0	24.0	London, England	Gen., fresh fruit	8,200	6,526	4,228
Beneputian	31	18	25	31	18	02	31	12	30	Swedish	Ore S. S. Corp.	383.0	72.0	31.0	Portland, Ore.	Iron ore	21,680	15,560	4,490
Henderson ¹⁴	31	18	53	31	18	20	31	13	22	American	Ore S. S. Corp.	383.0	61.0	18.0	Baltimore, Md.	Iron ore	681	3,675	2,350
San Jose	31	19	32	31	6	41	31	11	30	American	U. S. Navy	330.0	61.0	18.0	San Francisco, Cal.	General, lumber	6,379	5,699	4,187
American Star	31	19	35	31	7	01	31	15	50	American	United Fruit Co.	330.0	61.0	18.0	San Francisco, Cal.	General, lumber	7,907	6,046	4,326
El Glover	1	2	30	1	8	06	1	16	35	British	C. T. Byrning Co.	409.3	52.2	25.0	Seattle, Wash.	Crude oil	7,197	5,919	4,400
Ryukyu Maru	1	6	40	1	8	35	1	18	05	Japanese	C. T. Byrning Co.	385.0	51.0	25.4	Lith, Wash.	Sugar	7,302	5,919	4,400
Agaveid ¹	1	6	40	1	9	17	1	17	55	American	U. S. Navy	295.0	41.0	15.0	London, P. I.	General	9,287	7,720	5,615
Greenland ¹⁶	1	4	40	1	9	32	1	18	55	American	Ritchfield Oil Co. of Cal.	429.3	59.2	27.0	Balboa, C. Z.	Gasoline	9,287	7,720	5,615
Canadian	1	8	00	1	10	25	1	18	55	Dutch	U. S. Army	160.2	32.0	30.0	Balboa, C. Z.	General	3,578	5,117	3,807
Beard	1	9	15	1	10	45	1	19	20	Dutch	Royal Neth. S. S. Co.	263.4	49.8	30.0	Corral, Chile	General	610	1,182	742
Contractor	1	12	00	1	12	50	1	20	25	British	Can. Nat. Steamships	430.0	56.2	20.0	Auckland, N. Z.	General	2,000	7,680	5,494
Ludwigshafen	1	16	00	1	16	47	1	22	45	German	North German Lloyd	393.4	54.3	26.2	Talcahuano, Chile	General	7,817	6,600	4,622
Zenon	1	18	30	1	17	21	1	11	40	French	Pench Line	425.0	55.0	24.0	Corral, Chile	General	7,708	6,982	4,384
Atlantic Sun	1	18	30	1	6	01	1	13	20	American	Sun Oil Co.	429.3	55.0	25.0	Los Angeles, Calif.	Gasoline	8,994	7,567	5,283
Chilrop	1	20	40	1	6	33	1	14	25	American	Chile S. S. Co., Inc.	411.3	54.1	20.3	Antofagasta, Chile	General	5,050	6,609	4,972
Point Sur	2	2	00	2	7	11	2	14	50	American	Sways & Hoyt	324.0	46.2	22.0	New Orleans, La.	Lumber, general	3,110	3,984	2,612
Nevedan	2	18	30	2	7	29	2	15	40	American	Amer.-Hawaian Line	409.8	57.8	25.0	Seattle, Wash.	General	5,716	6,829	4,627
Portmar	2	2	15	2	8	15	2	16	35	American	Calmar S. S. Corp.	460.8	54.0	23.0	Seattle, Wash.	Lumber	7,283	6,581	4,795
Santa Barbara ¹³	2	8	35	2	11	08	2	18	00	American	Grace Line	465.0	64.0	24.0	Valparaiso, Chile	General	9,071	10,687	6,633

¹ Tanker. ¹³ Motor ship. ¹⁷ Barge, towed by launch *Uniti*. ¹⁸ Wheat, lumber, and bean oil.
² General household effects, autos. ¹⁹ Transport. ²⁰ Coffee, cacao, tagua, etc. ²¹ Coffee. ²² Nitrates, copper, and cotton.
³ General household effects, autos. ¹⁹ Transport. ²⁰ Coffee, cacao, tagua, etc. ²¹ Coffee. ²² Nitrates, copper, and cotton.
All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
July 27	Pastores	United Fruit Co.	Port Limon, C. R.	July 27	No. 9685 ²⁵	Pan American Airways	San Salvador and waypts.
July 27	Iriona	United Fruit Co.	Puerto Colombia.	July 27	No. 945-M ²⁵	Pan American Airways	Talara via waypts.
July 27	Daytonian	Leyland S. S. Line.	Liverpool via waypts.	July 27	No. 9137 ²⁵	Pan American Airways	Miami via waypts.
July 27	Teutonia	United Fruit Co.	Colon, R. P.	July 27	Hamburg-American Line	Hamburg-American Line	Cartagena, Colombia.
July 28	Ulua	United Fruit Co.	New York via Habana.	July 27	Pastores	United Fruit Co.	New York via Habana.
July 28	Cundinamarca-C-33 ²⁵	Seadta Airplane Co.	Barranquilla and waypts.	July 27	Lareda	United Fruit Co.	New Orleans and waypts.
July 28	No. 9670 ²⁵	Pan American Airways	San Salvador and waypts.	July 27	Anachucuna ²⁴	United Fruit Co.	Colon, R. P.
July 28	Banan	United Fruit Co.	Kingston, Jamaica.	July 28	Daytonian	United Fruit Co.	Port Limon, C. R.
July 29	No. 945-M ²⁵	Pan American Airways	Talara via waypts.	July 29	Atlantian	Leyland S. S. Line.	Cienfuegos, Cuba.
July 29	Venezuela	Royal Netherlands S. S. Co.	Amsterdam via waypts.	July 29	Banan	United Fruit Co.	Bocas, R. P.
July 30	Carare	Elders & Fyffes Line	Amvouth via waypts.	July 30	No. 9664 ²⁵	Pan American Airways	San Salvador and waypts.
July 30	Galicia	Hamburg-American Line	Hamburg via waypts.	July 30	No. 9776 ²⁵	Pan American Airways	Miami via waypts.
July 30	Castilla	United Fruit Co.	New Orleans, La.	July 30	Ulua	United Fruit Co.	Port Limon, C. R.
July 30	Skaola	United Fruit Co.	New York via Kingston.	July 30	Venezuela	Royal Netherlands S. S. Co.	Port Limon, C. R.
July 30	Pearl Marie ²⁶	Pan American Airways	Colon, R. P.	July 30	Carare	Elders & Fyffes Line.	Amvouth via waypts.
July 30	No. 142-M ²⁵	Pan American Airways	Miami via waypts.	July 31	Inapaquina ²⁴	G. I. Bryan	Bluefields, Nicaragua.
July 31	No. 9685 ²⁵	Pan American Airways	San Salvador via waypts.	July 31	Annecia I. ²⁴	A. Tagaropulos	Colon, R. P.
July 31	Inapaquina ²⁴	A. Tagaropulos	Colon, R. P.	July 31	Anachucuna ²⁴	United Fruit Co.	Colon, R. P.
July 31	Annecia I. ²⁴	A. Tagaropulos	Colon, R. P.	July 31	Finn	Aluminium Line	Colon, R. P.
July 31	Anachucuna ²⁴	United Fruit Co.	Colon, R. P.	July 31	No. 309-N ²⁵	Pan American Airways	Pto. Cabello and waypts.
July 31	Cristobal	Panama R. R. S. S. Line.	New Orleans and waypts.	July 31	No. 300-N ²⁵	Pan American Airways	Talara via waypts.
July 31	Bolivar	Colombian S. S. Line.	New York via waypts.	July 31	Finn	Hamburg-American Line	Port Limon, C. R.
August 1	Atlantida	Standard Fruit & S. S. Co.	New Orleans and Habana.	July 31	Aluminium Line	Aluminium Line	Cartagena, Colombia.
August 1	Iriona	United Fruit Co.	Port Limon, C. R.	July 31	Skaola	United Fruit Co.	New York via waypts.
August 1	Venezuela	Royal Netherlands S. S. Co.	Pto. Cabello and waypts.	August 1	No. 9670 ²⁵	United Fruit Co.	Cartagena, Colombia.
August 2	No. 309-N ²⁵	Pan American Airways	Miami via waypts.	August 1	Cundinamarca-C-33 ²⁵	Seadta Airplane Co.	San Salvador and waypts.
August 2	No. 9776 ²⁵	Pan American Airways	New Orleans via Habana.	Bolivar	Colombian S. S. Line.	Colombian S. S. Line.	Barranquilla and waypts.
August 2	Cartago	United Fruit Co.	Colon, R. P.	August 2	Dora K. ²⁷	A. L. Surgeon	New York via Kingston.
August 2	No. 9670 ²⁵	Pan American Airways	Colon, R. P.	August 2	Nueva Espana ²⁴	Diez & Garcia	Bluefields and Port Limon.
August 2	Cartago	United Fruit Co.	Colon, R. P.	August 2	Escuere Fuego ²⁶	Nueva Fuego	Bluefields, Nicaragua.
August 2	Nueva Espana ²⁴	Diez & Garcia	Colon, R. P.	August 2	Iriona	United Fruit Co.	Colon, R. P.
August 2				August 2	Atlantida	Standard Fruit & S. S. Co.	New Orleans and waypts.
August 2				August 2	Venezuela	Royal Netherlands S. S. Co.	Amsterdam and waypts.

PORT OF BAILEAO.

July 28	Elg ²⁸	Thorwald Hansen	Puntarenas, C. R.	July 28	Elg ²⁸	Thorwald Hansen	Arica, Chile
July 30	Sambu ²⁹	Hans Elliot.	Panama Bay, R. P.	July 30	Sambu ²⁹	Hans Elliot.	Panama Bay, R. P.
July 30	Real ²⁹	Hans Elliot.	Panama Bay, R. P.	July 31	Real ²⁹	Hans Elliot.	Panama Bay, R. P.

* Other than ships passing through the Canal.

PORT OF CRISTOBAL.

July 28	Elg ²⁸	Thorwald Hansen	Puntarenas, C. R.	July 28	Elg ²⁸	Thorwald Hansen	Arica, Chile
July 30	Sambu ²⁹	Hans Elliot.	Panama Bay, R. P.	July 30	Sambu ²⁹	Hans Elliot.	Panama Bay, R. P.
July 30	Real ²⁹	Hans Elliot.	Panama Bay, R. P.	July 31	Real ²⁹	Hans Elliot.	Panama Bay, R. P.

* Other than ships passing through the Canal.

PORT OF CRISTOBAL.

July 28	Elg ²⁸	Thorwald Hansen	Puntarenas, C. R.	July 28	Elg ²⁸	Thorwald Hansen	Arica, Chile
July 30	Sambu ²⁹	Hans Elliot.	Panama Bay, R. P.	July 30	Sambu ²⁹	Hans Elliot.	Panama Bay, R. P.
July 30	Real ²⁹	Hans Elliot.	Panama Bay, R. P.	July 31	Real ²⁹	Hans Elliot.	Panama Bay, R. P.

* Other than ships passing through the Canal.

Net Tonnage of Vessels Transiting the Panama Canal during the Fiscal Year 1930.

During the fiscal year ended June 30, 1930, there were 6,185 transits of the Panama Canal by commercial vessels, including 19 of foreign naval vessels paying tolls on the basis of displacement tonnage, and 6,166 of merchant vessels, yachts, etc. Fifty-three and three-tenths per cent of the 6,166 commercial transits on which tolls were levied on net tonnage were by vessels of from 4,000 to 6,000 net tons, Panama Canal measurement, 5.8 per cent by vessels under 1,000 net tons, and 5.6 per cent by vessels over 8,000 net tons; the latter included 102 transits by vessels of over 10,000 net tons, as compared with 86 such transits during the fiscal year 1929. The average tonnage of all transits was 4,862 net tons as compared with 4,666 net tons for the preceding fiscal year, an increase of 196 tons, or 4.2 per cent.

Vessels of Italian registry averaged the highest net tonnage, 6,501, with those of Danzig second, 6,150 net tons, and British ships third, averaging 5,244 net tons. The lowest recorded average by nationality was for Nicaragua, one transit of a vessel of 140 tons, the next lowest 176 net tons for 74 transits of Colombian vessels, the third, 331 for 2 transits of a Costa Rican vessel.

The German liner *Columbus* of 20,079 net tons, Panama Canal measurement, was the largest commercial vessel transiting during the year.

The following tabulation shows the 6,166 commercial transits in groups according to net tonnage, Panama Canal measurement, segregated by nationality, together with the average tonnages and the per cent which the total of each group formed of the total number of transits for the fiscal years 1930 and 1929:

Nationality.	Number of transits in net tonnage groups.											Panama Canal net tonnage.	Average Panama Canal net tonnage.			
	20 to 99, inclusive.	100 to 999, inclusive.	1,000 to 1,999, inclusive.	2,000 to 2,999, inclusive.	3,000 to 3,999, inclusive.	4,000 to 4,999, inclusive.	5,000 to 5,999, inclusive.	6,000 to 6,999, inclusive.	7,000 to 7,999, inclusive.	8,000 to 8,999, inclusive.	9,000 to 9,999, inclusive.		10,000 and over.	Total.	Fiscal year 1930.	Fiscal year 1929.
Argentine				1	1							1	3,816	3,816		
Belgian				1	12	5	4	1				23	119,499	5,196	5,276	
British	13	52	69	13	171	518	215	207	99	78	54	38	8,006,962	5,244	5,070	
Chilean	2	1	1	2	10	27						43	164,152	3,817	4,353	
Colombian		74										74	13,026	176	386	
Costa Rican		2										2	662	331	39	
Danish		7	2	18	9	16	34	4	1			91	381,766	4,195	4,129	
Danzig								17	17	2		36	221,382	6,150	6,247	
Dutch		37			6	13	17	39	24	5		141	671,250	4,761	4,635	
Finnish			1	1								2	3,810	1,905	2,331	
French					4	62	43	4	11			124	627,760	5,063	4,772	
German		73	60	7	26	64	70	60	14			2	376	1,433,074	3,811	3,496
Greek					7	14						22	89,221	4,056	3,904	
Italian				3	4	9	1	26	8		15	66	429,091	6,501	5,933	
Japanese		1	4			79	69		6			159	803,182	5,051	5,000	
Mexican				1								1	2,159	2,159		
Nicaraguan			1									1	140	140		
Norwegian	10	13	18	8	57	120	102	30	9			4	371	1,660,101	4,475	3,765
Panamanian	35	7	2	5		4		6	1			60	87,826	1,464	2,406	
Peruvian					1		1					2	8,959	4,480	2,372	
Spanish					1							1	4,209	4,209	3,791	
Swedish		4	3		16	60	32	10				125	571,535	4,572	4,296	
United States	10	20	108	377	88	896	768	400	72	55	33	58	2,885	14,534	4,495	5,038
Yugoslav					10	18	5					33	142,537	4,319	4,198	
Total	70	292	268	437	422	1,906	1,378	804	247	138	102	102	6,166	29,980	614	4,862
Per cent of total, fiscal year 1930	1.1	4.7	4.4	7.1	6.8	31.0	22.3	13.0	4.0	2.2	1.7	1.7	100.0			
Fiscal year 1929	0.6	5.8	4.5	7.9	7.3	34.2	20.0	11.6	3.4	1.8	1.5	1.4	100.0			

Panama Canal Records.

A statement of various records made by traffic through the Panama Canal at different times was published in THE PANAMA CANAL RECORD of March 26, 1930. Since that time new records have been established with respect to several items, viz., vessel of greatest length; vessel of greatest registered gross, registered net, and Panama Canal net tonnage; largest cargo carried on any ship passing through the Canal; greatest amount of cargo passing through the Canal in one day's traffic; and, with respect to one day's commercial traffic in one direction, largest Panama Canal net tonnage, tolls and cargo. A revised statement of the various records to date is presented below.

In the tabulation directly following, data are shown separately for merchant or commercial vessels and for naval vessels because they are different types of craft:

MERCHANT OR COMMERCIAL VESSELS.

Feature.	Record.	Vessel.	Date of transit.
Length.....	778.0 feet.....	Columbus.....	May 3, 1930.
Beam.....	83.2 feet.....	Malolo.....	November 2, 1927.
Draft.....	36 feet.....	Chilore.....	March 25, 1928.
Tonnage:			
Registered gross.....	32,565 tons.....	Columbus.....	May 3, 1930.
Registered net.....	15,988 tons.....	Columbus.....	May 3, 1930.
Panama Canal net.....	20,079 tons.....	Columbus.....	May 3, 1930.
United States net.....	13,769 tons.....	Empress of Scotland.....	April 2, 1926.
Tolls.....	\$17,211.25.....	Empress of Scotland.....	April 2, 1926.
Cargo.....	23,000 tons crude oil.	C. O. Stillman.....	July 20, 1930.

NOTE.—The *Empress of Scotland* has made one transit since April 2, 1926.

NAVAL VESSELS.

Feature.	Record.	Vessel.	Date of transit.
Length.....	888 feet.....	U. S. S. Saratoga.....	February 5, 1928.
Beam.....	107.9 feet.....	U. S. S. Saratoga.....	February 5, 1928.
Draft.....	33 feet 1 inch.....	U. S. S. Colorado.....	March 19, 1926.
Tonnage.....	44,799 tons displacement.	H. M. S. Hood.....	July 23 and 24, 1924.
Tolls.....	\$22,399.50.....	H. M. S. Hood.....	July 23 and 24, 1924.

NOTE.—The U. S. S. *Lexington*, a sister ship of the U. S. S. *Saratoga*, transited on March 25, 1928; both of these vessels transited also in 1930.

In the following data the term "commercial traffic" includes all craft subject to payment of tolls except small vessels under 20 net tons, Panama Canal measurement. It does not include vessels in the public service of the Governments of the United States, Panama, and Colombia, and ships which transit the Canal solely for the purpose of having repairs made at the Balboa shops and dry-dock, as such vessels are exempt from payment of tolls.

Largest year's commercial traffic:

Number of transits, 6,456, fiscal year 1928.
 Panama Canal net tonnage, 30,353,189, calendar year 1929.
 Tolls, \$27,592,715.84, calendar year 1929.
 Cargo, 31,450,493, calendar year 1929.

Largest month's commercial traffic:

Number of transits, 603, January, 1929.
 Panama Canal net tonnage, 2,771,280, January, 1929.
 Tolls, \$2,502,815.12, January, 1929.
 Cargo, 2,858,835 tons, January, 1929.

Largest day's commercial traffic:

Number of transits, 33, October 1, 1927.
 Panama Canal net tonnage, 152,610, November 15, 1927.
 Tolls, \$137,053.98, April 10, 1928.
 Cargo, 174,247 tons, April 22, 1930.

Largest day's commercial traffic in one direction:

Number of transits, 22, Atlantic to Pacific, December 8, 1928.
 Panama Canal net tonnage, 116,618, Pacific to Atlantic, April 22, 1930.
 Tolls, \$104,687.50, Pacific to Atlantic, April 22, 1930.
 Cargo, 149,894 tons, Pacific to Atlantic, April 22, 1930.

Largest number of transits in any one day:

Thirty-five Government and 22 commercial vessels, a total of 57 vessels, January 17, 1924.

Smallest day's commercial traffic occurred on November 18, 1924, on which the number of transits was 2; Panama Canal net tonnage, 2,870; tolls, \$2,865; and cargo, 2,809 tons.

The lowest pro rata cost of tolls per ton of cargo carried through the Canal on a commercial vessel is \$0.2103 per ton, which occurred with the transit of the Swedish motor ship *Svealand*, on January 2, 1930, carrying a cargo of iron ore from Cruz Grande, Chile, to Sparrows Point, Md. On this transit the *Svealand* carried 22,244 tons of cargo and paid tolls of \$4,678.75.

The fastest transit through the Canal, in 4 hours and 10 minutes, was made by the United States destroyer *Lawrence*, Atlantic to Pacific, on December 2, 1917.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
 BALBOA HEIGHTS, C. Z., July 26, 1930.

No. 727.

AID TO NAVIGATION.

The Panama Canal, Atlantic entrance, beacon replaced.—Beacon No. 5, a fixed white light on the east side of the channel, Atlantic entrance of the Panama Canal, which was temporarily discontinued June 13, 1930, was reestablished July 25, 1930. (See Notice to Mariners No. 716, June 16, 1930).

Approximate position: Latitude 9° 20' 25" N., longitude 79° 55' 15" W.

H. BURGESS,
 Governor.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
 BALBOA HEIGHTS, C. Z., August 6, 1930.

No. 730.

Colombia, Cartagena approach; information on Salmedina Bank light vessel.—The following is quoted from "Daily Memorandum" for July 29, 1930, published by the Hydrographic Office, U. S. Navy:

The master of the Canadian steamship *Beacon Street*, reports that from reliable compass bearings he found Salmedina Bank light vessel to be located one-half mile, 140°, from its present charted position.

Approximate position: Latitude 10° 23' 10" N., longitude 75° 38' 42" W.

H. BURGESS,
 Governor.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

Comparison of Canal Traffic in July, 1930, with July Traffic in Previous Years.

The traffic through the Panama Canal during the month of July, 1930, showed an increase as compared with the preceding month, and a decrease as compared with July, 1929.

The 488 transits in July this year are fewer by 39, or 7.4 per cent, than the 527 transits in the corresponding month a year ago, while the net tonnage, Panama Canal measurement, aggregating 2,438,895 tons, is less by 29,385 tons, or 1.2 per cent, than the total of 2,468,280 tons in July, 1929. The cargo tonnage of 2,402,047 tons for July, 1930, shows a decline of 196,115 tons, or 7.5 per cent, from the total of 2,598,162 tons passing through the Canal in July, 1929.

In the tabulation below are shown the number of transits, net tonnage, Panama Canal measurement, and the tons of cargo carried through the Canal during the month of July each year from 1915 to 1930, inclusive, and for comparison, the monthly averages for the corresponding fiscal year ending on June 30th following:

Calendar year.	Month of July.			Fiscal year.	Average per month for fiscal year.		
	Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.		Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.
1914 ¹				1915	^a 102	^a 351,197	^a 465,567
1915	166	542,676	715,253	1916	63	199,687	257,843
1916	145	482,202	624,061	1917	150	483,213	588,213
1917	181	557,411	664,924	1918	172	517,839	627,669
1918	169	497,489	584,998	1919	169	510,416	578,385
1919	158	519,898	568,172	1920	206	712,170	781,203
1920	225	856,798	886,814	1921	241	951,323	966,001
1921	206	810,613	708,982	1922	228	951,455	907,075
1922	251	1,127,871	1,211,100	1923	331	1,550,482	1,630,656
1923	474	2,310,027	2,337,784	1924	436	2,179,073	2,249,559
1924	422	2,036,097	2,037,154	1925	389	1,904,595	1,996,570
1925	418	1,951,295	1,960,654	1926	433	2,064,549	2,169,787
1926	456	2,154,821	2,185,527	1927	456	2,185,651	2,312,351
1927	509	2,496,955	2,450,468	1928	533	2,454,836	2,469,226
1928	509	2,318,395	2,291,955	1929	534	2,468,433	2,555,250
1929	527	2,468,280	2,598,162	1930	515	2,493,385	2,502,519
1930	483	2,438,895	2,402,047	.....	^a 496	^a 2,453,086	^a 2,402,199

¹ Canal opened August 15, 1914.

² Average for 12 months of fiscal year ended June 30, 1915.

³ First 7 months of calendar year 1930.

Tanker Traffic Through the Panama Canal in July, 1930.

During the month of July, 1930, 120 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 656,757, on which tolls of \$588,395.10 were paid. Cargo amounted to 688,237 tons, which included 681,937 tons of mineral oil and 6,300 tons of coconut oil. In point of net tonnage, tanker traffic increased 12.1 per cent as compared with the same traffic for the corresponding month a year ago, while cargo tonnage increased 42.7 per cent.

Tanker traffic comprised 24.6 per cent of the total commercial transits through the Canal during the month; made up 26.9 per cent of the total Panama Canal net tonnage; were the source of 27.0 per cent of the tolls collected; and carried 28.7 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of July, 1930, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for July, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	9	45,888	\$33,101.52	.....
Danish.....	3	14,156	10,194.43	.....
Danzig.....	1	6,127	4,411.44	.....
Dutch.....	1	4,317	3,105.24	.....
French.....	1	5,385	3,877.20	.....
German.....	1	4,435	3,193.20	.....
Italian.....	1	4,320	3,110.40	.....
Norwegian.....	5	26,334	18,961.48	.....
United States.....	29	170,725	123,932.14	.....
Total, July, 1930.....	51	231,690	202,949.10	.....
Total, June, 1930.....	65	345,896	256,091.09	27,972
Total, May, 1930.....	48	272,155	202,856.35	33,923
Total, July, 1929.....	60	323,512	237,677.21	19,064
<i>Pacific to Atlantic.</i>				
Belgian.....	1	5,410	6,186.25	9,517
British.....	14	69,944	71,257.50	133,002
Danzig.....	2	11,990	13,003.75	23,498
French.....	3	14,318	15,462.50	25,376
Norwegian.....	5	24,805	26,615.00	47,479
Panamanian.....	1	6,450	7,062.50	12,817
Swedish.....	1	6,235	6,486.25	12,132
United States.....	42	235,835	236,372.25	424,506
Total, July, 1930.....	69	375,967	385,446.00	688,237
Total, June, 1930.....	44	245,517	251,649.15	432,961
Total, May, 1930.....	44	236,762	242,891.54	422,174
Total, July, 1929.....	51	262,465	267,964.88	462,463

* Includes 6,300 tons coconut oil.

The following tabulation shows the tanker traffic through the Canal during July, 1930, classified according to trade routes:

ATLANTIC TO PACIFIC.

Trade routes.	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	27	161,087	\$115,982.64	.....
United States to South America.....	2	7,652	5,509.44	.....
Canada to United States.....	1	3,913	2,887.50	.....
Canada to South America.....	2	12,989	9,352.08	.....
South America to United States.....	1	2,081	1,498.32	.....
Cristobal to United States.....	1	5,725	4,122.00	.....
Europe to United States.....	16	82,116	59,185.68	.....
Europe to South America.....	1	6,127	4,411.44	.....

PACIFIC TO ATLANTIC.

Trade routes.	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	39	217,227	\$217,404.75	389,841
United States to Cristobal.....	1	5,725	6,346.25	13,000
United States to West Indies.....	4	22,138	23,007.50	40,630
United States to Europe.....	18	88,455	94,723.75	161,855
South America to United States.....	3	17,537	19,132.50	37,004
South America to Canada.....	2	13,774	14,483.75	28,299
South America to Europe.....	1	5,927	6,508.75	11,308
Philippine Islands to United States.....	1	4,284	3,838.75	* 6,300

* Coconut oil.

Of the tanker traffic passing through the Canal in July, 1930, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for July, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
July, 1930.....	45	248,934	\$179,400.78	.....
June, 1930.....	56	309,721	219,434.66	9,782
May, 1930.....	33	190,213	139,975.35	14,359
July, 1929.....	46	249,097	184,098.41	19,961
<i>From Los Angeles.</i>				
July, 1930.....	55	302,142	307,081.25	545,893
June, 1930.....	33	189,892	191,944.40	330,780
May, 1930.....	32	173,014	177,384.65	311,898
July, 1929.....	36	190,089	194,298.90	347,537

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending August 2, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Chateau Thierry.....	U. S. Government.....	July 19.....	July 22.....	580	10
St. Mihiel.....	U. S. Government.....	July 22.....	July 22.....	240	.....
Kenowis.....	U. S. Government.....	July 23.....	July 24.....	1,125	106
Cambrai.....	U. S. Government.....	July 24.....	July 25.....	13	6
La Perla.....	United Fruit Co.....	July 25.....	July 28.....	714	49
Muca.....	Roland Line.....	July 25.....	July 26.....	58	147
Cauca.....	National Navigation Co.....	July 25.....	July 26.....	.....	249
Abraham Lincoln.....	Fred Olsen & Co.....	July 28.....	July 29.....	1,194	1
Venezuela.....	Panama Mail S. S. Co.....	July 29.....	July 30.....	21	18
Caldas.....	National Navigation Co.....	July 29.....	July 29.....	.....	82
El Salvador.....	Panama Mail S. S. Co.....	July 30.....	July 31.....	254	.....
Santa Elisa.....	Graes Line.....	July 30.....	July 30.....	70	183
Henderson.....	U. S. Government.....	July 31.....	August 1.....	2	.....

Names of Streets and Roads.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 30, 1930.

To all concerned:

The following names are given to the streets and roads in the Canal Zone hereinafter described:

ANCON-BALBOA.

The intersection of Gorgas Road, Heights Road, and Lion Hill Road in Ancon, is designated Cashew Place.

The new street south of Plank Street intersecting Gavilan Road at right angles at the cable office in Balboa, extending westward, is designated Akee Street.

The new street south of Akee Street, intersecting Gavilan Road, extending westward and paralleling Akee Street, is designated Almond Street.

The new street intersecting Akee and Almond Streets, running north and south paralleling Gavilan Road, is designated Calabash Street.

The new street intersecting Amador Road at the northern boundary of Balboa Radion Station reservation and extending eastward, is designated Banyan Street.

The new street intersecting Amador Road just north of Banyan Street and extending eastward is designated Bamboo Street.

The new street running north and south, intersecting Banyan and Bamboo Streets, paralleling Amador Road, is designated Bougainvillea Street.

CRISTOBAL.

The street extending eastward from Bolivar Highway on the north side of the Commissary Cold Storage Plant, and intersecting Guava Road, is designated Whitlock Street, in honor of Major F. O. Whitlock, formerly Subsistence Officer, Isthmian Canal Commission.

The street extending eastward from Bolivar Highway on the south side of the Commissary Cold Storage Plant, and northward to Whitlock

Street, is designated Wilson Street, in honor of Colonel E. T. Wilson, formerly Subsistence Officer Isthmian Canal Commission.

H. BURGESS,
Governor.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.20 per barrel, Diesel oil \$1.80 per barrel, at Balboa and Cristobal.

Coal is applied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$8 per ton of 2,240 pounds at Cristobal, and \$11 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Binders for The Panama Canal Record.

Cardboard covers, punched and fitted with brass fasteners forming binders for THE PANAMA CANAL RECORD are offered for sale at 25 cents a set, for the benefit of those who wish to keep a file of the issues for ready reference. Orders may be addressed to The Panama Canal, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective August 7, 1930.

Commodities.	Unit.	Price.
Brass, bar, average	Lb	\$0.24
Brass, sheet, average	Lb.	.31
Bronze, Tobin, average	Lb.	.23
Gasoline, motor grade	Gal.	1.35
Metal, yellow	Lb	.29
Oakum, Navy, spun	Lb.	.15
Oakum, Navy, unspun	Lb.	.16
Oil, Diesel, at Cristobal only, in bulk, no surcharge	Bbl. of 42 gals.	1.50
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder	Gal.	.23
Oil, burning, Coiza	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250	Gal.	.46
Oil, kerosene, in drums	Gal.	.10
Oil, marine engine	Gal.	.50
Paint, lead, white, dry	Lb.	.14
Paint, lead, white, in oil	Lb.	.13
Paint, zinc oxide, dry	Lb.	.10
Paint, zinc oxide, in oil	Lb.	.13
Grease, gear, chain and wire rope, lubricating	Lb.	.05
Grease, yellow, cup, No. 3	Lb.	.08
Grease, yellow, cup, No. 5	Lb.	.09
Soda, ash	Lb.	.03
Waste, cotton, colored	Lb.	.14
Waste, cotton, white	Lb.	.16

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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The Panama Canal, Washington, D. C.

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Certificate.—By direction of the Governor of the Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., August 13, 1930. No. 2.

Sale of Diesel Oil at Cristobal by Union Oil Company of California.

The Union Oil Company of California, has rented tanks Nos. 151 and 152, each of 42,000 barrels capacity, at the Mount Hope oil handling plant from The Panama Canal, and stocked them with Diesel oil for sale to shipping and other interests. Oil was delivered into the tanks from the company's tanker *Santa Maria*, which transited the Canal on July 28th, bound from Los Angeles to Cristobal. The company now sells both fuel and Diesel oil at both terminals, and is the first private company to handle Diesel oil at the Atlantic end of the Canal, though The Panama Canal has maintained a tank of Diesel oil there since 1923. The Panama Canal has sold its stock of Diesel oil at Cristobal to the Union Oil Company and, for the present, withdrawn from selling Diesel oil at either terminal. It continues to maintain stocks of fuel oil at both terminals.

The Union Oil Company of California, is the original supplier of fuel oil on the Isthmus. In January, 1905, the company broached the matter of securing permission to build a pipeline across the Isthmus, and stated that it was primarily for the purpose of transferring oil from tankers in the Pacific to tankers on the Atlantic side for delivery to the eastern seaboard of the United States and Europe. A revocable license covering construction and operation of such pipeline and appurtenances was signed by the President of the United States on January 10, 1906, and the laying of pipe began in March, 1906. Oil was first supplied to the Isthmian Canal Commission in March, 1907, and on November 14, 1907, the pipeline across the Isthmus was in complete operation. The transfer of oil between tankers, similar to the transfer of cargo between ships by shipment over the Panama Railroad, never developed extensively, and supplying the Canal organization with oil became the main feature of the company's business on the Isthmus; so much so that in 1909 it threatened to remove its plant and line if that business could not be had on more favorable terms. With several revisions of contracts the company continued to supply oil to the Canal and Railroad until the end of the year 1914. On December 31, 1914, the revocable license under which the company had been operating its pipeline across the Isthmus was terminated, and in 1915 the line was removed. The Panama Canal laid a line from Balboa to Paraiso, reaching thus the dredging equipment in Gaillard Cut and all of the more important distribution points along the Pacific section of the Canal.

Postal Address of the Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, August 9, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.	
Ionie	2	15.40	3	6.13	3	13.07	3	14.27	British.	White Star Line	500.3	63.3	29.2	London, England.	Auckland, N. Z.	General	7,000	12,872	9,577	
Malayan																				
Prince 2	2	23.50	3	6.35	3	13.12	3	14.27	British.	Prince Line, Ltd.	441.6	60.0	20.6	Boston, Mass.	Manila, P. I.	General	2,155	9,209	6,245	
Buenos Aires	3	8.55	3	7.30	3	13.55	3	15.08	Japanese.	Osaka Shosen Kaisha	461.3	62.0	24.6	Buenos Aires, Arg.	Kobe, Japan.	General	4,315	10,446	7,631	
Maru 2	3	5.35	3	7.40	3	14.20	3	15.27	American.	Roosevelt S. S. Co., S. B.	456.1	56.0	24.3	Philadelphia, Pa.	Osaka, Japan.	Case oil, general.	5,853	8,313	5,991	
Defiance 2	28	17.40	3	8.55	3	15.50	3	17.18	German.	Hamburg-American Line	227.0	34.0	13.7	Cristobal, C. Z.	Guayaquil, Ecuador	General	214	1,572	1,011	
Cerigo	3	3.10	3	14.55	3	21.35	3	22.40	Danish.	East Asiatic Co.	410.0	55.2	20.7	Copenhagen, Den k.	Vancouver, B. C.	Coke, iron, gen.	4,658	7,031	5,358	
Australien																				
Birmingham																				
City	3	21.05	3	21.15	4	9.34	4	11.38	American.	Isthmian S. S. Lines	395.0	55.0	23.0	Baltimore, Md.	Tacoma, Wash.	Steel, general.	6,158	7,304	5,188	
Malang	4	2.20	4	6.20	4	13.18	4	14.30	American.	Mallory Transp. Line	344.8	50.1	24.6	Freeport, Tex.	Auckland, N. Z.	Sulphur	5,912	4,330	3,010	
Solana	4	5.00	4	6.25	4	13.39	4	14.30	American.	Tidewater Oil Co.	419.5	56.5	19.0	New York, N. Y.	San Francisco, Cal.	Ballast	7,060	7,060	5,025	
Tsuyama Maru	4	6.45	4	7.35	4	14.33	4	16.00	Japanese.	Nippon Yusen Kaisha	445.0	58.0	23.6	Baltimore, Md.	Kobe, Japan.	Ballast (9)	6,860	7,356	5,681	
S-14 2																				
S-16 2																				
S-17 2																				
Moveria 2	4	11.05	4	11.15	4	17.44	4	21.98	British.	Donaldson Brothers	385.0	51.0	18.2	Glasgow, Scotland	Vancouver, B. C.	General	929	6,576	4,724	
Paul																				
Luckenbach	4	11.10	4	12.05	4	18.45	4	19.25	American.	Luckenbach Line	471.0	59.6	22.11	Houston, Tex.	Seattle, Wash.	General	5,312	9,627	6,539	
Charles Nelson	4	11.30	4	13.30	4	20.30	4	22.50	American.	Nelson Line	380.4	53.1	18.0	New York, N. Y.	Seattle, Wash.	General	2,450	5,659	4,138	
Baralt	1	19.20	4	14.55	4	21.12	4	23.44	Dutch.	Royal Nether. S. S. Co.	432.0	59.0	21.0	Cristobal, C. Z.	Guayaquil, Ecuador	General	60	5,183	7,762	
Los Angeles 2	2	20.45	4	14.50	4	21.49	4	25.00	German.	Hamburg-American Line	202.0	33.0	11.4	Hamburg, Germany	Vancouver, B. C.	General	4,446	8,183	6,344	
Calgaroh, Navty 2	4	14.40	4	15.40	4	22.23	5	17.50	British.	Imperial Oil Co.	521.5	70.4	29.0	Montreal, Canada	Talara, Peru	Ballast	12,339	7,717		
Launch, Navty																				
Barneveld	4	6.35	5	6.06	5	13.03	5	21.44	Dutch.	Royal Nether. S. S. Co.	416.6	58.3	20.3	Cristobal, C. Z.	Balboa, C. Z.	Ballast	3,664	7,320	5,980	
Eryna 2	4	21.10	5	6.25	5	14.05	5	15.00	Norwegian.	Anglo-Mexican Pet. Co.	396.2	55.1	20.0	Hull, England	Corral, Chile	General				
Niagara 2	4	15.05	5	7.20	5	14.09	5	16.05	American.	U. S. Navy	429.0	56.2	19.0	Cristobal, C. Z.	Los Angeles, Calif.	Ballast				
I. C. White 2	5	4.15	5	7.55	5	14.58	5	16.05	American.	Huasteca Petroleum Co.	429.0	56.2	19.0	Baltimore, Md.	Balboa, C. Z.	Ballast				
Somersat	5	4.55	5	8.25	5	15.30	5	20.00	British.	Federal Steam Nav. Co.	460.0	62.0	25.0	Glasgow, Scotland	Los Angeles, Calif.	General	9,130	10,550	7,963	
Willenat	5	8.30	5	9.30	5	16.57	5	18.00	American.	Williams S. S. Line	415.0	56.0	15.0	Norfolk, Va.	San Diego, Calif.	General	1,418	7,750	5,965	
Eastern Sun 2	5	18.45	5	18.50	6	9.28	6	10.35	American.	Sun Oil Co.	480.0	66.0	21.0	Philadelphia, Pa.	Los Angeles, Calif.	General				
2304-S 5	6	00.50	6	6.15	6	10.32	6	11.30	American.	L. H. Baker	434.3	57.8	18.0	Cristobal, C. Z.	Gatun, C. Z.	Ballast				
Georgian																				
S-12 3																				
Jane																				
Christenson	6	7.50	6	8.25	6	15.21	6	16.15	American.	Arrow Line	409.5	54.2	21.6	Jacksonville, Fla.	Los Angeles, Calif.	General	4,772	6,615	4,966	
Wiegand	5	14.35	6	8.50	6	15.46	6	16.45	German.	North German Lloyd	393.1	54.1	19.0	Hamburg, Germany	San Antonio, Chile	General	2,678	6,573	4,629	

6 Wire rods, phosphate, etc.

3 Launch.

4 Survey ship.

3 Submarine.

2 Motor ship.

1 Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Niagara ¹²	3	21.20	4	6.55	4	15.05	5	7.20	American.	U. S. Navy.	243.0	36.0		Balboa, C. Z.	Cristobal, C. Z.	General.	7,000	5,680	4,030
Boliver	4	0.15	4	7.05	4	16.10	5	17.50	Belgian.	Cie. Maritime Belge.	400.0	52.0	23.0	Vancouver, B. C.	Antwerp, Belgium.	General.	9,317	7,819	6,101
Barn.	4	20.15	4	8.08	4	20.00	5	00.35	Dutch.	Royal Neth. S. S. Co.	400.6	58.0	26.1	Corral, Chile.	Hamburg, Germany.	General.	5,412	7,946	5,698
Greylock	4	6.30	4	8.39	4	18.25	4	18.25	American.	Sea Shipping Co.	430.7	54.3	24.0	Everett, Wash.	Baltimore, Md.	Lumbr, wood pulp	7,806	5,937	4,072
Ohrleance ¹³	4	9.50	4	12.16	4	19.35	4	21.45	British.	Caucasian Oil Co., Ltd	410.0	53.0	25.0	Los Angeles, Calif.	Lands End, Eng.	Gasoline.			
Canadian																			
Importer	4	14.00	4	14.54	4	22.25	5	00.55	British.	Can. Nat. Steamships.	400.5	52.4	23.0	Vancouver, B. C.	Montreal, Canada.	Lumber, general.	6,114	5,891	4,186
Pennsylvania.	4	9.55	5	6.17	5	13.15	5	14.00	American.	Panama-Pacific Line.	586.4	80.3	28.0	San Francisco, Cal.	New York, N. Y.	General.	7,109	25,262	18,194
Santa Teresa.	4	20.00	5	6.46	5	13.45	5	21.08	American.	Grace Line.	360.2	51.6	22.0	Talcahuano, Chile.	New York, N. Y.	General.	3,421	5,726	4,086
Panquaco ¹⁴	5	6.51	5	14.00	5	14.00	5	14.00	Panamanian	Panamanian Gov't.	125.6	23.5		Balboa, C. Z.	Cristobal, C. Z.	General.			
Yankee Arrow	5	1.50	5	7.20	5	15.50	5	15.50	American.	Standard Transp. Co.	468.3	62.7	28.0	Los Angeles, Calif.	Providence, R. I.	Gasoline.	11,298	9,841	6,946
K. I.																			
Luckenbach.	5	2.30	5	7.48	5	15.15	5	15.15	American.	Luckenbach Line.	446.0	57.1	27.0	Portland, Oreg.	Boston, Mass.	General.	5,638	8,552	6,236
Iowan.	5	3.00	5	8.26	5	16.20	5	16.20	American.	Amer.-Hawaiian Line.	407.7	53.7	24.0	Portland, Oreg.	Boston, Mass.	General.	5,785	7,079	5,028
Kinai Maru ¹⁵	5	8.15	5	8.59	5	16.45	5	16.45	Japanese.	Osaka Shosen Kaisha	446.0	60.6	22.0	Kongkong, China.	New York, N. Y.	(17)	3,817		
Annie																			
Johnson ¹⁶	5	8.25	5	11.31	5	18.50	6	00.10	Swedish.	Rederi Nordstjernan	392.0	52.6	25.0	Vancouver, B. C.	Stockholm, Sweden	Wheat, fruit, gen.	5,578	6,650	4,919
Oneda.	5	8.50	5	14.11	5	20.35	5	20.35	American.	Ford Motor Co.	251.0	43.6	18.0	Cocos Bay, Col. Riv.	Chester, Pa.	Lumber, auto pis.	2,023	2,656	1,621
Theodore																			
Roosevelt ¹⁷	5	17.40	5	15.12	5	22.40	6	10.17	Norwegian.	Fred Olsen & Co.	425.5	55.2	29.0	Vancouver, B. C.	London, England.	Wheat, general.	9,662	7,563	5,637
Teno.	5	14.20	6	6.16	6	13.35	6	16.05	Chilean.	Cia. Sud. Amer. de Vap	424.8	56.0	24.0	Talcahuano, Chile.	New York, N. Y.	General.	1,881	7,764	4,672
Penelope ¹⁸	5	22.55	6	6.41	6	14.45	6	15.45	Danzig.	W. Tankship Rederei.	470.0	63.2	28.0	Talara, Peru	Hamburg, Germany	Naphtha.	11,330	9,392	6,127
Tamiahua ¹⁹	6	5.35	6	7.08	6	15.45	6	16.05	American.	Richfield Oil Co.	500.0	71.2	30.0	Los Angeles, Calif	New York, N. Y.	Gasoline.	17,000	11,667	8,542
Sciota ²⁰	6	1.30	6	7.10	6	16.35	6	16.35	American.	U. S. Navy.	155.0	30.0		Balboa, C. Z.	Cristobal, C. Z.	Ballast.			
Lycia ²¹	6	6.30	6	8.11	6	16.35	6	16.35	British.	Canadian Transp. Co.	300.0	44.2	22.0	Vancouver, B. C.	Sagua, Cuba.	Lumber, general.	3,294	3,333	2,207
Rangitane ²²	6	20.45	6	10.26	6	18.20	6	18.20	British.	N. Z. Shipping Co.	531.0	70.2	27.2	Wellington, N. Z.	London, England.	Frozen, general.	5,213	18,205	13,494
Onondaga.	6	14.45	6	18.45	6	18.40	7	10.40	American.	Ford Motor Co.	551.0	43.6	19.0	Aberdeen, Wash.	Philadelphia, Pa.	Lumber.	2,292	2,656	1,621
Parosa.	6	20.25	7	6.35	7	13.50	7	15.20	British.	Federal Steam Nav. Co.	479.8	62.2	25.0	New Caledonia.	Hull, England.	(18)	8,860	9,457	6,367
Pacific Hemlock	6	22.30	7	6.48	7	14.40	7	14.40	American.	Dimon S. S. Corp.	409.7	54.2	22.4	Seattle, Wash.	Philadelphia, Pa.	Lumber, general	7,104	6,630	4,916
Cid.	7	5.15	7	7.29	7	14.00	7	20.08	British.	Pacific Steam Nav. Co.	264.8	41.2	15.0	Pacasmayo, Peru.	New York, N. Y.	(19)	278	2,746	1,626
Kent.	7	11.45	7	12.57	7	19.30	7	19.30	British.	Federal Steam Nav. Co.	460.0	62.6	22.0	Bluff, N. Z.	Glasgow, Scotland	Frozen, general.	5,263	10,609	8,135
Marie																			
Maersk ²³	8	2.00	8	6.09	8	13.40	8	13.40	Danish.	Anglo-Saxon Pet. Co.	466.3	61.8	26.1	Los Angeles, Calif	Curacao, D. W. I.	Gasoline.	12,100	8,645	6,054
Chile ²⁴	7	22.30	8	6.47	8	16.30	8	16.15	Danish.	Esst. Asiatic Co.	425.0	50.5	28.0	Vancouver, B. C.	Copenhagen, Den.	General.	8,859	7,382	5,603
Grant.	8	1.36	8	7.15	8	14.30	9	11.00	American.	U. S. Army.	508.0	55.4	24.0	San Francisco, Cal.	Brooklyn, N. Y.	War Dept. gen.	356		
Manizales	8	5.00	8	8.13	8	16.00	8	16.00	German.	Roland Line.	216.5	32.9	13.0	Guaymas, Ecuador	Cristobal, C. Z.	General.	718	1,132	741
Pat Doherty ²⁵	8	10.45	8	11.28	8	18.35	8	21.20	American.	Richfield Oil Co.	430.2	59.2	27.2	Baltimore, Md.	Cristobal, C. Z.	Gasoline.	9,066	7,978	5,839
Barrabin.	8	13.50	8	14.43	8	21.45	8	21.45	British.	Barr, Crombie & Co.	405.5	55.7	25.0	Mijillones, Chile.	Delaware River.	Nitrates.	8,600	6,881	4,845

¹⁷ Raw silk, wood oil, wool, and general.

¹⁸ For orders.

¹⁹ Tug.

²⁰ Revenue cutter.

²¹ Motor ship.

²² Balisa, wood, coffee, rice, and ivory nuts.

²³ Chrome ore, copra, and cocoa.

²⁴ Tanker.

²⁵ Survey ship.

San Rafael.....	8 14 ⁵⁰	8 15 39	8 22 55	8 22 55	American.....	Quaker Line.....	410.0	54.4	19.0	Portland, Ore.....	Philadelphia, Pa.....	Lumber, general.....	3,246 ¹	6,484	4,675
Hague Mart.....	8 20 00	9 6 40	9 13 40	9 19 00	Japanese.....	Osaka Shosen Kaisha.....	407.2	50.8	18.5	Hongkong, China.....	Boston, Mass.....	Gas oil.....	1,859	6,533	4,772
Cathwood.....	9 2 40	9 6 58	9 15 05	9 15 05	American.....	Union Oil Co. of Calif.....	435.0	56.0	28.4	Los Angeles, Calif.....	Baltimore, Md.....	War Dept. gen.....	10,500	7,482	5,143
Somme.....	9 4 05	9 7 15	9 14 45	9 23 05	American.....	U. S. Army.....	448.0	58.0	23.0	San Francisco, Cal.....	Brooklyn, N. Y.....	(20)	493	.....	.....
Salvador.....	9 4 10	9 8 15	9 15 50	9 23 05	British.....	Common Steam Nav. Co.....	215.0	33.5	13.0	San Jose, Guatemala.....	Cristobal, C. Z.....	(21)	204	1,270	735
Kurdistan.....	9 8 35	9 9 20	9 18 10	9 19 50	British.....	Pacific Brothers.....	420.0	54.0	26.8	Autofagasta, Chile.....	Azores.....	Nitrates.....	8,220	6,298	4,576
Kanewka.....	9 5 14	9 10 03	9 18 18	9 18 18	American.....	Amer.-Hawaiian Line.....	414.5	53.7	24.0	Seattle, Wash.....	Boston, Mass.....	General.....	4,781	7,049	4,941
Karamca.....	9 3 30	9 12 36	9 19 05	9 19 05	British.....	Show, Savill & Albion.....	481.0	64.0	23.3	Dunedin, N. Z.....	London, England.....	General.....	4,700	11,720	8,373
Bisenya.....	9 9 15	9 13 32	9 20 25	9 20 25	German.....	Atlantic Tank Rhedercl.....	431.0	55.0	26.0	Los Angeles, Calif.....	Avonmouth, Eng.....	Benzine.....	8,416	6,585	4,435

1 Tanker. 20 Peanut oil, beans, tea, bamboo, and general. 21 Coffee, hides, bullion, and general. All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
August 3.....	Inapaquina 21.	A. Tanageropulos.	Colon, Rep. of Panama.	August 3.....	Inapaquina 21.	A. Tanageropulos.	Colon, Rep. of Panama.
August 3.....	Utia.	United Fruit Co.	Port Limon, Costa Rica.	August 3.....	Utia.	United Fruit Co.	New York via Habana.
August 3.....	Dorelian.	Leyland S. S. Line.	Liverpool via waypts.	August 3.....	No. 9685 21.	Pan American Airways.	San Salvador and waypts.
August 3.....	No. 9064 21.	Pan American Airways.	San Salvador via waypts.	August 3.....	No. 142-M 21.	Pan American Airways.	Miami via waypts.
August 4.....	Alameta I. 21.	A. Tanageropulos.	Colon, Rep. of Panama.	August 3.....	Christobal.	Panama, R. P. S. S. Line.	New York via Haiti.
August 4.....	No. 9670 21.	Pan American Airways.	New York via Habana.	August 3.....	Cartago.	United Fruit Co.	New Orleans and waypts.
August 4.....	Cundinamarca C-33 21.	Seadla Airplane Co.	San Salvador and waypts.	August 4.....	Dorelian.	Leyland S. S. Line.	Tarata, Cuba.
August 5.....	Magdalena.	Hamburg-American Line.	Barranquilla & waypts.	August 4.....	Alameta I. 21.	Pan American Airways.	Colon, Rep. of Panama.
August 5.....	No. 945-M 21.	Pan American Airways.	Hamburg via waypts.	August 6.....	No. 9694 21.	Pan American Airways.	San Salvador via waypts.
August 6.....	Swiftwind.	C. D. Mallory & Co.	Talara via waypts.	August 6.....	Calamares.	United Fruit Co.	Miami via waypts.
August 6.....	Tela.	United Fruit Co.	Cartagena, Colombia.	August 6.....	Magdalena.	Hamburg-American Line.	Port Limon, Costa Rica.
August 6.....	No. 9137 21.	Pan American Airways.	New Orleans, La.	August 6.....	Tela.	United Fruit Co.	Puerto Colombia, Colom.
August 6.....	No. 9685 21.	Pan American Airways.	Miami via waypts.	August 7.....	Zacapa.	United Fruit Co.	Curacao, D. W. I.
August 7.....	Baracoa.	Colombian S. S. Line.	New York via Kingston.	August 7.....	Swiftwind.	C. D. Mallory & Co.	Curacao, D. W. I.
August 7.....	Pellerin de la Touche.	Standard Fruit & S. S. Co.	San Salvador via waypts.	August 7.....	No. 300-N 21.	Pan American Airways.	Guayaquil and waypts.
August 8.....	Amapala.	Hamburg-American Line.	New York via waypts.	August 7.....	No. 141-M 21.	Pan American Airways.	Pto. Cabello and waypts.
August 8.....	Magdalena.	Pan American Airways.	Havre via waypts.	August 8.....	No. 9685 21.	Pan American Airways.	San Salvador and waypts.
August 9.....	Tela.	United Fruit Co.	Port Limon, Costa Rica.	August 8.....	Baracoa.	Colombian S. S. Line.	New York via Kingston.
August 9.....	No. 144-M 21.	Pan American Airways.	Pto. Cabello and waypts.	August 8.....	Cundinamarca C-33 21.	Seadla Airplane Co.	Barranquilla and waypts.
August 9.....	Tela.	United Fruit Co.	Pto. Colombia, Colombia.	August 8.....	Pellerin de la Touche.	French Line.	Havre via waypts.
August 9.....	Parismina.	United Fruit Co.	New Orleans and Habana.	August 9.....	Castilla.	Standard Fruit & S. S. Co.	New Orleans and waypts.
August 9.....	No. 142-M 21.	Pan American Airways.	Miami via waypts.	August 9.....	Amapala.	Standard Fruit & S. S. Co.	New Orleans and waypts.
August 9.....	No. 9064 21.	Pan American Airways.	San Salvador and waypts.				

PORT OF BALBOA.

August 3.....	Real 24.	Hans Elliot.	Panama Bay, R. P.	August 4.....	Real 24.	Hans Elliot.	Panama Bay, R. P.
August 4.....	Ocoima 4.	Imperial Oil Co., Ltd.	Talara, Peru.	August 4.....	Saramacca.	United Fruit Co.	San Francisco, Calif.
August 8.....	Saramacca.	United Fruit Co.	Panama Bay, R. P.	August 8.....	Dos Hermanos 24.	La Union 24.	Panama Bay, R. P.
August 8.....	La Union 24.	A. Valdez.	Panama Bay, R. P.	August 8.....	Sambu 24.	Sambu 24.	Panama Bay, R. P.
August 9.....	Hans Elliot.	Hans Elliot.	Panama Bay, R. P.	August 9.....	Real 24.	Hans Elliot.	Panama Bay, R. P.
August 8.....	Real 24.	Hans Elliot.	Panama Bay, R. P.				

22 Motor boat. 23 Air-mail carrier. 24 Motor schooner. * Other than ships passing through the Canal.

1 Tanker.

* DEPARTURES.

* ARRIVALS.

Commercial Traffic Through the Panama Canal in July, 1930, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of July, 1930, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for July, 1929 and 1928. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States	80	447,874	339,049	548,158	339,858	\$381,425.14	194,481
East coast of United States to west coast of South America:							
British	6	21,909	17,624	30,015	18,212	17,595.14	5,641
Chilean	1	4,672	3,433	7,310	3,976	4,291.25	2,327
Norwegian	3	7,308	5,020	8,120	4,824	6,265.56	2,170
Swedish	1	4,496	3,743	15,337	4,385	3,237.12	
United States	13	57,223	45,525	80,073	45,533	46,650.66	16,268
Total	24	95,608	75,346	140,855	76,930	78,039.73	26,406
Europe to west coast of United States:							
British	5	25,247	21,845	35,211	21,660	18,240.00	
Danish	2	12,078	10,094	16,549	10,121	8,696.16	
Dutch	1	4,317	3,492	5,792	3,379	3,108.24	
French	1	5,385	4,595	7,650	4,435	3,877.20	
German	2	11,178	8,664	14,142	8,460	9,280.60	4,205
Italian	1	4,320	3,701	6,468	3,640	3,110.40	
Norwegian	6	29,823	25,005	41,922	24,847	21,472.56	
Total	18	92,348	77,396	127,734	76,542	67,785.26	4,205
East coast of United States to Far East:							
British	5	27,381	17,072	27,608	16,965	21,340.00	29,077
Danish	1	2,510	1,938	3,252	1,985	2,422.50	3,500
Japanese	6	31,569	25,163	39,140	24,626	31,298.75	36,180
United States	4	17,434	12,378	20,181	12,321	15,472.50	13,039
Total	16	78,894	56,551	90,181	55,897	70,533.75	81,796
Europe to west coast of Canada:							
British	6	35,590	22,394	40,703	23,906	27,992.50	9,358
Danish	1	5,660	5,233	6,919	5,223	6,541.25	5,611
French	1	7,146	4,020	8,068	4,497	5,025.00	2,781
German	2	13,500	8,186	14,501	8,543	10,232.50	11,840
Italian	1	6,041	5,092	7,057	4,455	6,365.00	2,468
Norwegian	2	11,626	6,970	11,390	7,092	8,712.50	5,220
Swedish	1	5,337	2,861	5,210	3,747	3,576.25	4,408
United States	1	4,614	3,400	5,689	3,400	4,250.00	7,351
Total	15	89,514	58,156	99,537	60,863	72,695.00	49,037
Europe to west coast of South America:							
British	5	27,378	20,860	34,683	21,510	26,075.00	22,761
Danish	1	6,127	5,268	8,939	5,007	4,411.44	
Dutch	2	8,926	5,596	8,998	5,273	6,995.00	7,540
French	1	5,563	4,282	6,863	4,287	5,352.50	3,614
German	4	20,568	15,442	24,475	15,195	19,302.50	16,243
Norwegian	1	3,820	2,333	3,886	2,335	2,916.25	6,100
Total	14	72,382	53,781	87,844	53,612	65,052.69	56,258
Cristobal to west coast of South America:							
Colombian	3	372	339	621	327	423.75	427
Dutch	1	742	294	780	323	367.50	9
German	4	3,491	2,260	4,347	2,334	2,825.00	687
Total	8	4,605	2,893	5,748	2,984	3,616.25	1,123

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of United States to Philippine Islands:							
British	4	25,712	13,980	26,087	14,243	\$17,475.00	9,390
Norwegian	1	6,829	3,973	6,687	4,085	4,966.25	3,918
United States	1	6,612	4,906	7,587	4,808	6,132.50	7,049
Total	6	39,153	22,859	40,361	23,136	28,573.75	20,357
East coast of United States to Australasia:							
British	5	26,286	17,479	28,221	17,672	21,848.75	18,707
Europe to Australasia:							
British	5	46,405	32,286	53,890	33,303	40,357.50	26,168
Cristobal to west coast of United States:							
United States	5	15,571	11,559	19,372	11,424	12,224.50	3,318
Cristobal to Balboa:							
Panamanian	1	47	47	86	47	56.40	30
United States	3	232	227	20	16	173.40	.....
Total	4	279	274	106	63	229.80	30
East coast of United States to west coast of Canada:							
British	1	5,308	3,028	4,971	3,033	3,785.00	.....
United States	2	7,862	5,866	9,474	5,852	7,332.50	9,494
Total	3	13,170	8,894	14,445	8,885	11,117.50	9,494
East coast of South America to west coast of United States:							
Danish	1	2,081	1,747	3,056	1,857	1,498.32	.....
United States	2	10,051	7,354	11,525	7,285	9,192.50	10,639
Total	3	12,132	9,101	14,581	9,142	10,690.82	10,639
Cristobal to west coast of Central America:							
British	2	2,322	1,930	3,661	2,061	2,412.50	1,663
Colombian	1	163	164	233	166	195.60	380
Total	3	2,485	2,094	3,894	2,227	2,608.10	2,043
Around the world:							
United States	2	18,423	12,651	21,017	12,651	15,813.75	5,977
Europe to west coast of Central America:							
French	1	4,101	3,247	5,280	3,228	4,058.75	1,854
German	1	3,533	2,542	4,201	2,554	3,177.50	1,763
Total	2	7,634	5,789	9,481	5,782	7,236.25	3,617
West Indies to west coast of Canada:							
British	2	4,271	3,718	5,848	3,692	4,635.00	7,341
Canadian intercoastal:							
British	2	9,181	6,918	11,136	6,861	8,647.50	8,934
East coast of Canada to west coast of South America:							
British	2	12,989	11,069	20,336	11,398	9,352.08	.....
East coast of Canada to Australasia:							
British	2	9,618	7,682	12,586	7,734	9,602.50	6,341
East coast of Canada to west coast United States:							
United States	1	3,913	3,850	5,105	3,749	2,887.50	.....
East coast of Canada to west coast of Central America:							
British	1	193	187	263	176	233.75	175
East coast of Canada to Far East:							
Japanese	1	4,672	4,264	5,823	4,261	5,330.00	7,786
East coast of United States to Hawaii:							
United States	1	1,740	1,542	2,647	1,542	1,927.50	3,229
East coast of Central America to Australasia:							
Norwegian	1	4,859	2,619	4,444	2,669	3,273.75	7,525

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of South America to west coast of Canada:							
Norwegian.....	1	5,132	2,912	4,885	3,005	\$3,640.00	5,887
West Indies to west coast of Central America:							
German.....	1	1,469	1,155	1,930	1,128	1,057.68	.....
West Indies to Australasia:							
British.....	1	3,946	2,663	4,251	2,635	3,328.75	7,290
Europe to Far East:							
British.....	1	5,161	2,867	4,702	2,865	3,583.75	7,800
Supplemental bill.....						80.00	.....
Grand total, July, 1930...	230	1,129,916	\$37,604	1,389,381	842,686	947,428.30	575,964
Grand total, July, 1929...	273	1,291,828	991,474	1,618,784	990,494	1,119,496.15	909,976
Grand total, July, 1928...	272	1,269,085	965,479	1,580,367	976,284	1,103,618.21	748,160

PACIFIC TO ATLANTIC.

United States interoceanic:							
United States.....	92	504,358	385,805	621,114	386,359	\$482,135.59	695,394
West coast of Canada to Europe:							
British.....	16	85,446	58,046	94,661	58,186	72,557.50	121,508
Danish.....	2	12,767	8,394	14,642	8,942	10,492.50	15,740
Dutch.....	1	6,066	4,863	7,655	4,799	6,078.75	8,306
French.....	1	7,466	4,438	7,759	4,677	5,547.50	8,466
German.....	3	19,737	12,469	21,466	12,953	15,586.25	22,873
Italian.....	1	6,010	4,334	7,061	4,460	5,417.50	8,910
Norwegian.....	2	10,223	6,908	11,379	7,037	8,635.00	16,448
Swedish.....	1	5,485	3,406	5,558	4,246	4,257.50	7,350
United States.....	2	10,992	7,736	12,583	7,717	9,681.25	15,903
Total.....	29	164,192	110,594	182,764	113,017	138,253.75	225,504
West coast of South America to east coast of United States:							
British.....	9	43,204	35,195	60,429	36,689	42,886.81	67,167
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	3,308
Swedish.....	2	8,917	7,486	30,676	8,762	9,357.50	43,796
United States.....	15	66,446	55,085	96,422	57,037	68,419.85	145,739
Total.....	27	123,272	101,232	194,837	106,464	124,996.66	260,010
West coast of United States to Europe:							
Belgian.....	2	11,005	8,642	14,253	8,214	10,802.50	17,488
British.....	13	57,796	46,494	76,651	46,912	58,117.50	103,280
French.....	3	14,318	12,370	19,712	11,420	15,462.50	25,376
Greek.....	1	4,099	2,636	4,386	2,639	3,295.00	7,093
Norwegian.....	4	18,201	15,775	26,344	15,633	19,718.75	35,165
Panamanian.....	1	6,450	5,650	8,947	5,651	7,062.50	12,817
United States.....	1	8,619	7,026	11,247	6,953	8,782.50	15,365
Total.....	25	120,488	98,593	161,540	97,422	123,241.25	216,584
West coast of South America to Europe:							
British.....	6	32,962	26,168	43,060	26,363	32,710.00	35,818
Danzig.....	1	5,927	5,207	8,744	5,026	6,508.75	11,308
Dutch.....	3	3,195	2,494	3,981	2,423	3,117.50	4,851
French.....	1	4,932	4,219	6,669	4,224	5,273.75	3,777
German.....	6	29,270	19,419	31,805	19,246	24,273.75	40,010
Italian.....	2	18,702	10,399	23,387	13,529	12,998.75	2,222
Norwegian.....	1	3,965	2,637	4,436	2,664	3,296.25	3,839
Yugoslav.....	1	4,570	3,271	5,291	3,299	4,088.75	8,152
Total.....	19	103,523	73,814	127,373	76,774	92,267.50	109,977
Philippine Islands to east coast United States:							
Danish.....	1	4,483	2,495	4,194	2,532	3,118.75	4,451
Japanese.....	8	39,295	34,777	49,510	34,273	43,471.25	59,837
Panamanian.....	1	6,955	3,998	7,044	3,988	4,997.50	2,494
Swedish.....	1	1,513	1,307	1,600	1,054	1,633.75	2,400
United States.....	3	16,720	12,380	18,468	11,505	15,475.00	20,577
Total.....	14	68,966	54,957	80,816	53,352	68,696.25	89,759

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Australasia to Europe:							
British.....	9	80,507	56,576	93,056	57,888	\$70,720.00	43,353
French.....	1	5,623	4,343	7,007	4,402	5,428.75	3,707
Total.....	10	86,136	69,919	100,063	62,290	76,148.75	47,060
West coast of South America to Cristobal:							
Colombian.....	2	248	226	414	218	282.50	354
German.....	6	5,200	3,384	6,490	3,472	4,230.00	4,650
Swedish.....	1	746	600	1,036	582	750.00	113
Total.....	9	6,194	4,210	7,940	4,272	5,262.50	5,117
West coast of United States to Cristobal:							
United States.....	5	14,517	11,375	18,911	11,234	14,218.75	14,995
West coast of United States to West Indies:							
British.....	2	9,239	7,700	12,877	7,545	9,625.00	16,184
Norwegian.....	1	6,604	5,517	9,153	5,527	6,836.25	12,314
Swedish.....	1	6,295	5,189	8,945	6,592	6,486.25	12,132
Total.....	4	22,138	18,406	30,975	19,664	23,007.50	40,630
Australasia to east coast of United States:							
Norwegian.....	2	8,822	4,984	8,449	4,948	6,230.00	13,721
United States.....	1	5,167	3,816	6,094	3,816	4,770.00	6,600
Total.....	3	13,989	8,800	14,543	8,764	11,000.00	20,321
West coast of Canada to east coast United States:							
Norwegian.....	1	4,910	2,615	4,402	2,624	3,268.75	7,400
United States.....	2	8,308	6,124	9,884	6,158	7,655.00	12,032
Total.....	3	13,218	8,739	14,286	8,782	10,923.75	19,432
Hawaii to east coast of United States:							
United States.....	2	6,453	5,173	8,681	5,923	6,466.25	12,078
Canadian intercoastal:							
British.....	2	8,229	6,523	11,151	6,884	8,153.75	12,071
West coast of South America to east coast of Canada:							
British.....	1	7,711	6,391	11,404	5,691	7,988.75	16,199
Danzig.....	1	6,063	5,196	8,932	5,002	6,495.00	12,100
Total.....	2	13,774	11,587	20,336	10,693	14,483.75	28,299
West coast of Central America to Cristobal:							
British.....	2	2,293	1,920	3,703	2,065	2,400.00	822
Balboa to Cristobal:							
Panamanian.....	2	67	62	106	63	4,965.00	.....
West coast of Central America to east coast of United States:							
German.....	1	2,500	2,504	2,447	1,421	1,878.00	.....
West coast of United States to east coast of South America:							
United States.....	1	5,014	3,508	5,652	3,522	4,385.00	5,354
West coast of Canada to east coast of South America:							
Norwegian.....	1	5,131	2,906	4,884	3,004	3,632.50	5,276
West coast of South America to West Indies:							
British.....	1	4,071	3,116	4,896	3,136	2,931.12	.....
Australasia to east coast of Canada:							
British.....	1	4,402	3,257	5,370	3,260	4,071.25	1,267
Far East to east coast of United States:							
Japanese.....	1	5,294	4,181	6,609	4,040	5,226.25	2,488
United States.....	1	6,226	4,938	7,615	4,838	6,172.50	6,445
Total.....	2	11,520	9,119	14,224	8,878	11,398.75	8,933

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Far East to West Indies:							
Norwegian.....	1	4,534	2,465	4,114	2,453	\$3,081.25	7,200
Grand total, July, 1930...	258	1,308,979	989,584	1,640,726	999,696	1,233,083.52	1,826,083
Grand total, July, 1929...	254	1,176,452	915,824	1,499,297	919,094	1,140,086.22	1,688,186
Grand total, July, 1928...	237	1,049,310	806,408	1,342,537	814,540	1,005,464.98	1,543,795

Traffic by Nationality for July, 1930.

The following tabulation shows the commercial traffic through the Canal during the month of July, 1930, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with corresponding totals for July, 1929 and 1928:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	55	288,897	203,602	344,172	207,926	\$236,584.72	160,646
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	2,327
Colombian.....	4	535	503	854	493	619.35	807
Danish.....	5	22,329	19,012	29,776	19,186	19,158.23	9,111
Danzig.....	1	6,127	5,268	8,939	5,007	4,411.44	.....
Dutch.....	4	13,985	9,382	15,570	8,980	10,470.74	7,549
French.....	4	22,195	16,144	27,861	16,447	18,313.45	8,249
German.....	14	53,739	38,249	63,596	38,214	45,875.88	34,738
Italian.....	2	10,361	8,793	13,525	8,095	9,475.40	2,463
Japanese.....	7	36,241	29,427	44,963	28,837	36,628.75	43,966
Norwegian.....	15	69,397	48,832	81,334	48,857	51,246.87	30,820
Panamanian.....	1	47	47	86	47	56.40	30
Swedish.....	2	9,833	6,604	20,547	8,132	6,813.37	4,408
United States.....	115	591,558	448,308	730,848	448,439	503,482.45	270,845
Total, July, 1930.....	230	1,129,916	837,604	1,389,381	842,686	947,428.30	575,964
Total, July, 1929.....	273	1,291,828	991,474	1,618,784	990,494	1,119,496.15	909,976
Total, July, 1928.....	272	1,269,085	965,479	1,580,367	967,284	1,103,618.21	748,160

* Includes supplemental bill of \$80.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	11,005	8,642	14,253	8,214	\$10,892.50	17,488
British.....	62	335,869	251,386	417,258	254,619	312,161.68	417,669
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	3,308
Colombian.....	2	248	226	414	218	282.50	354
Danish.....	3	17,250	10,889	18,836	11,474	13,611.25	20,191
Danzig.....	2	11,990	10,403	17,676	10,028	13,003.75	23,498
Dutch.....	2	9,261	7,357	11,636	7,222	9,196.25	13,157
French.....	6	32,345	25,370	41,147	24,723	31,712.50	41,326
German.....	16	56,707	37,776	62,208	37,092	45,968.00	67,533
Greek.....	1	4,099	2,636	4,386	2,639	3,295.00	7,093
Italian.....	3	24,712	14,733	30,448	17,959	18,416.25	11,132
Japanese.....	9	44,589	38,958	56,119	38,313	48,697.50	62,325
Norwegian.....	13	62,390	43,807	73,161	43,890	54,758.75	101,363
Panamanian.....	4	13,472	9,710	16,097	9,702	12,109.65	15,311
Swedish.....	6	22,956	17,988	47,815	21,236	22,485.00	65,791
United States.....	125	652,829	502,966	816,671	505,062	628,161.69	950,492
Yugoslav.....	1	4,570	3,271	5,291	3,299	4,088.75	8,152
Total, July, 1930.....	258	1,308,979	989,584	1,640,726	999,696	1,233,083.52	1,826,083
Total, July, 1929.....	254	1,176,452	915,824	1,499,297	919,094	1,140,086.22	1,688,186
Total, July, 1928.....	237	1,049,310	806,408	1,342,537	814,540	1,005,464.98	1,543,795

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	2	11,005	8,642	14,253	8,214	\$10,892.50	17,488
British	117	624,757	454,983	761,430	462,545	548,746.40	578,315
Chilean	2	9,377	6,899	14,629	7,952	8,623.75	5,635
Colombian	6	783	729	1,263	711	931.85	1,161
Danish	8	39,579	29,901	48,612	30,669	32,769.48	23,302
Danzig	3	18,117	15,671	26,615	15,035	17,415.19	23,408
Dutch	6	23,246	16,739	27,236	16,232	19,666.99	21,706
French	10	54,540	41,514	69,008	41,170	50,025.95	49,575
German	30	110,446	76,025	125,894	75,306	91,843.88	102,271
Greek	1	4,099	2,636	4,336	2,639	3,295.00	7,093
Italian	5	35,073	23,526	43,973	26,084	27,891.65	13,600
Japanese	16	80,830	68,385	101,032	67,200	85,326.25	196,291
Norwegian	28	131,787	92,639	154,495	92,747	106,035.62	132,183
Panamanian	5	13,519	9,757	16,183	9,749	12,166.05	15,341
Swedish	8	32,789	24,592	63,362	29,363	29,238.37	70,199
United States	240	1,244,378	951,274	1,547,519	953,501	1,131,644.14	1,221,327
Yugoslav	1	4,570	3,271	5,291	3,299	4,083.75	8,152
Total, July, 1930	438	2,438,895	1,827,183	3,030,107	1,842,382	2,180,511.82	2,402,047
Total, July, 1929	527	2,468,280	1,909,834	3,118,081	1,909,583	2,259,582.37	2,598,162
Total, July, 1928	509	2,318,395	1,771,837	2,922,904	1,779,961	2,109,083.19	2,291,955

¹ Includes supplemental bill of \$80.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending August 2, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Adolf von Baeyer	Hamburg-American Line		July 27		319
Teutonia	Hamburg-American Line		July 27		91
Heredia	United Fruit Co.		July 27		11
Pastores	United Fruit Co.	July 27	July 27	3 ¹	181 ³
Erfurt	Roland Line	July 27	July 27		73
Takaoka Maru	Nippon Yusen Kaisha	July 27	July 27		74
Abraham Lincoln	Fred Olsen & Co.	July 27	July 23	341	(²)
Iriona	United Fruit Co.	July 27	July 23		88
Daytonian	Leyland S. S. Line	July 27	July 23	828	(²)
Venezuela	Panama Mail S. S. Co.	July 23	July 23	399	318
Banam	United Fruit Co.	July 23	July 23	19	(²)
Ulua	United Fruit Co.	July 28	July 30	797	47
Cerigo	Hamburg-American Line	July 28	July 28	581	
San Vicente	Quaker Line	July 29	July 29	3	(²)
Caldas	National Navigation Co.		July 29		211
Atlantian	Leyland S. S. Line		July 29		65
Oakland	Hamburg-American Line	July 29	July 29	59	112
Santa Elisa	Grace Line	July 29	July 30	108	173
Venezuela	Royal Netherlands S. S. Co.	July 29	July 30	174	(²)
Pacific Exporter	Furness, Withy & Co.	July 29	July 31	(¹)	461
Santa Maria	Union Oil Co.	July 29	July 31	13,000	(²)
City of San Francisco	Panama Mail S. S. Co.		July 30		1,365
Pearl Marie	R. Feuillebois	July 30	July 30	(¹)	17
Galicia	Hamburg-American Line	July 30	July 31	63	(²)
Castilla	United Fruit Co.	July 30	July 31	695	179
Sixaola	United Fruit Co.	July 30	July 31	373	258
Cali	North German Lloyd	July 30	August 2	861	185
Finn	Aluminium Line	July 31	July 31	272	(²)
Champerico	Pacific Steam Navigation Co.	July 31		276	
Orazio	Italian Line	July 31	August 2	85	472
Cristobal	Panama R. R. S. S. Line	July 31		3,511	
El Salvador	Panama Mail S. S. Co.	July 31	August 1	560	149
Bolivar	Colombian Line	July 31	August 1	294	429
Aconegua	Chilean Line	August 1	August 1	(¹)	194
San Jose	United Fruit Co.	August 1	August 2	545	796
American Star	Nelson Line	August 1	August 2	343	(¹)
Helder	Royal Netherlands S. S. Co.	August 1	August 2	240	143
Baralt	Royal Netherlands S. S. Co.	August 1	August 2	600	
Venezuela	Royal Netherlands S. S. Co.	August 1	August 2	(¹)	744
Atlantida	Standard Fruit & S. S. Co.	August 1	August 2	168	387
Iriona	United Fruit Co.	August 1	August 2	394	267
Ludwigshafen	North German Lloyd	August 2		51	
Dora K	R. Feuillebois	August 2	August 2	(¹)	21
Los Angeles	Hamburg-American Line	August 2		26	
Zenon	French Line	August 2		440	
Santa Barbara	Grace Line	August 2		95	
Cartago	United Fruit Co.	August 2		141	
Excupe Fuego	A. A. Conolly & A. Papi		August 2		49

¹ No cargo discharged.

² No cargo laded.

³ One package.

Osaka Shosen Kaisha Inaugurates New Express Service between New York and Far East through the Panama Canal.

The motor ship *Kinai Maru*, of the Osaka Shosen Kaisha, transited the Canal from the Pacific August 5, 1930, en route from Hongkong, Yokohama, and other Far Eastern ports, via Los Angeles and the Panama Canal, to New York, in a new express service. This vessel is reported as the first of six motor ships built for this trade. The other five, which are to be added during the remainder of the year, are the *Tokai Maru*, *Sanyo Maru*, *Hokuroku Maru*, *Kwanto Maru*, and *Kwansai Maru*. All are equipped with specially built silk rooms with a capacity of 857 tons of raw silk, have 300 tons refrigerated space, and deep tanks for carrying oil in bulk.

The *Kinai Maru* is of 8,365 registered gross, and 5,046 net tons, with length of 446 feet and beam of 60.6 feet.

Thatcher Highway.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 5, 1930.

To all concerned:

1. The road now being constructed from the Canal to the Zone boundary near Arraijan is hereby designated Thatcher Highway.
2. This action is taken on the suggestion of the Panama Federation of Highway Education and also in recognition of the distinguished services of the Honorable Maurice H. Thatcher in the interest of The Panama Canal, both as a member of the Isthmian Canal Commission and as a Member of Congress.

H. BURGESS,
Governor.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 8, 1930.

No. 731.

The following notice was received by the Hydrographic Office from the Assistant Superintendent of the Lighthouse Subdivision:

Panama Canal, Atlantic entrance, West breakwater beacon temporarily discontinued.—Effective August 7, 1930, the West breakwater beacon was temporarily discontinued until further notice.

A temporary flashing light of same characteristics will be installed on "A" frame of wrecking barge located slightly to west of beacon which at times will be obscured to the south by the "A" frame legs. Other lights may show from barge.

H. BURGESS,
Governor.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 15 years of operation.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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The Panama Canal Record, Balboa Heights, Canal Zone, or

The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.



Certificate.—By direction of the Governor of the Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., August 20, 1930. No. 3.

Completion of Sixteen Years of Canal Operation.

The Panama Canal completed 16 years of operation at the close of business on August 14, 1930, having been opened to commerce on August 15, 1914. During the 16 years of operation, 60,133 commercial vessels have transited the Canal, aggregating 267,490,045 net tons, Panama Canal measurement, on which tolls amounting to \$250,660,068.98 were levied, and which carried 279,338,333 long tons of cargo. Of these totals, the past 10 years have accounted for 82 per cent of the transits, 87 per cent of the net tonnage, 86 per cent of the tolls collected, and 86 per cent of the cargo carried.

Lines to the Panama Canal.

A new edition of the pamphlet, "Lines to the Panama Canal," revised as of June 1, 1930, has been issued by The Panama Canal and is being distributed to steamship lines and agencies, travel bureaus and similar organizations. The pamphlet contains the following information:

Services through the Canal, classified by principal trade routes; air services; passenger connections from the Canal, with fares; list of steamship lines, etc., having agencies on the Isthmus, with the names of their representatives; list of the agents on the Isthmus for steamship lines, air lines, oil companies, and other maritime interests, showing their locations and telephone numbers; consular and diplomatic representatives in the cities of Panama and Colon and the Canal Zone, with their telephone numbers; miscellaneous information concerning tolls charges, facilities for shipping, distances saved by the use of the Canal, etc.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,

BALBOA HEIGHTS, C. Z., August 15, 1930.

No. 734.

Cartagena, Colombia, wharf destroyed. The following is quoted from the "Daily Memorandum" of August 8, 1930, published by the Hydrographic Office of the U. S. Navy:

The American Consul at Cartagena, in a telegram dated August 5th, states that the only wharf at Cartagena was destroyed by fire on the night of August 4th.

H. BURGESS,
Governor.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, August 16, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Washington ²	9	15-15	10	6-15	10	12-51	10	14-50	French	French Line	470.0	61.0	19.8	Havre, France	Vancouver, B. C.	General	1,829	10,332	7,475
Mariner	9	19-45	10	6-30	10	14-00	10	15-20	American	Isthmian S. S. Lines	424.2	56.2	23.0	Baltimore, Md	Vancouver, B. C.	General	6,112	7,011	5,459
President	10	5-15	10	7-20	10	14-22	10	21-19	American	Dollar Line	502.0	62.2	24.0	New York, N. Y.	San Francisco, Cal.	General	3,038	12,613	9,251
Harrison	9	13-30	10	7-30	10	15-05	10	23-58	American	Husteca Petroleum Co.	320.0	45.1	17.3	Aruba, D. W. I.	Balboa, C. Z.	Gasoline	2,927	3,225	2,235
Charles E.	10	7-00	10	8-40	10	16-00	10	23-58	Norwegian	A. Johre	552.0	77.0	21.0	Houston, Nor'y	Washington, N. Z.	Ballast	18,536	12,676	9,264
Krimos ²	10	8-15	10	9-20	10	17-07	10	18-20	Japanese	Kokuni Kisen Kaisha	385.0	51.0	27.8	Sandford, Tex	Japan	Scrap iron	7,204	5,923	4,409
Chie Maru	10	12-55	10	13-20	10	21-10	10	5-13	American	Tampa Interocean Co.	410.0	66.0	27.0	New Orleans, La.	Manila, P. I.	Case oil, general	8,698	8,214	6,183
Volunteer	10	14-25	10	14-40	10	21-50	10	22-56	American	Sun Oil Co.	480.6	66.0	21.7	Chester, Pa.	Los Angeles, Calif.	Ballast	9,619	6,456	4,566
Sunol ²	10	17-15	11	6-00	11	13-05	11	14-30	Italian	Nav. Gen. Italiana	518.0	64.0	26.8	Genoa, Italy	Valparaiso, Chile	General	2,194	12,552	7,516
Colombo	10	18-25	11	6-15	11	13-49	11	15-20	British	Gow Harrison & Co.	375.0	51.6	21.5	Newcastle, England	Los Angeles, Calif.	Ballast	5,037	3,527	2,517
Vanduaara	10	19-10	11	7-10	11	14-48	11	16-25	French	Anglo-Saxon Pet. Co.	468.0	63.0	22.0	Beaumont, Tex	Los Angeles, Calif.	Ballast	11,750	10,684	9,351
Vendemiaire	11	8-40	11	8-50	11	17-13	11	20-00	American	Standard Transp. Co.	468.3	63.0	27.4	Rotterdam, Holland	Portland, Ore.	General	6,106	10,863	7,696
India Arrow	11	8-40	11	9-25	11	16-51	11	22-20	British	Royal Mail S. P. Co.	485.6	62.3	23.3	Cristobal, C. Z.	Guaymas, Mex	General	1,321	1,633	1,041
Lochgoil ²	3	16-10	11	10-10	11	17-42	11	18-45	German	Hamburg-American Line	227.0	34.0	13.8	London, England	Los Angeles, Calif.	Ballast	5,937	6,567	4,909
Durazo	10	23-15	11	11-30	11	19-04	11	20-08	British	Facile Steam Nav. Co.	368.0	43.0	19.6	Lyne, England	Valparaiso, Chile	Gen., cattle, coal	2,042	2,844	1,748
Alvarado	11	11-55	11	12-10	11	18-40	12	1-45	British	F. & W. Ritson	390.0	51.0	16.0	New York, N. Y.	Valparaiso, Chile	Gen., machinery	1,740	4,927	3,597
Cedar Branch	11	12-40	12	6-07	12	13-08	12	18-15	American	Grace Line	370.0	53.2	20.7	Cristobal, C. Z.	Balboa, C. Z.	General	1,376	6,255	4,016
Santa Inez ²	11	12-40	12	6-15	12	15-51	12	18-15	American	U. S. Navy	149.3	30.0		Baltimore, Md	Seattle, Wash.	Steel, general	5,937	6,567	4,909
Socota ⁴	11	17-15	12	5-55	12	14-02	12	15-30	American	Calmar S. S. Corp.	410.5	54.3	22.0	Baltimore, Md	Seattle, Wash.	Steel, general	5,937	6,567	4,909
Texmar	11	17-15	12	5-55	12	14-02	12	15-30	American	Calmar S. S. Corp.	410.5	54.3	22.0	Baltimore, Md	Seattle, Wash.	Steel, general	5,937	6,567	4,909
Standard ²	12	5-25	12	7-20	12	15-05	12	16-15	American	Anglo-American Oil Co.	513.0	68.2	20.0	London, England	Los Angeles, Calif.	Ballast	11,719	8,619	6,619
Athel-	12	6-30	12	8-25	12	15-51	12	20-25	British	British Molasses Co.	475.0	63.0	22.0	Greenock, England	Los Angeles, Calif.	Ballast	1,932	5,776	4,081
empress ²	11	1-15	12	10-10	12	16-28	12	17-30	American	Panama Mail S. S. Co.	360.0	51.0	21.3	New York, N. Y.	San Francisco, Cal.	General	2,925	1,132	741
Guatemala	8	16-00	12	9-40	12	17-02	12	18-15	German	North German Lloyd	218.5	32.9	12.2	Cristobal, C. Z.	Guaymas, Mex	General	2,289	6,755	4,895
Manizales	12	2-10	12	10-35	12	18-04	12	19-35	American	Quaker Line	410.5	54.0	17.7	Philadelphia, Pa.	Tacoma, Wash.	General	2,599	7,107	5,041
San Marcos	12	9-20	12	11-55	12	19-02	12	20-25	American	Chile S. S. Co.	391.8	51.3	20.0	Providence, R. I.	San Francisco, Cal.	Ballast	3,549	3,955	2,955
Chiloil ²	12	9-20	12	11-55	12	19-02	12	20-25	American	Chile S. S. Co.	391.8	51.3	20.0	Providence, R. I.	San Francisco, Cal.	Ballast	3,549	3,955	2,955
Peninsularian	12	12-60	13	13-10	13	19-50	12	21-00	American	Amer.-Hawaiian Line	407.7	53.7	20.0	Boston, Mass	Seattle, Wash.	General	2,599	7,107	5,041
Cape Horn ²	12	13-35	12	13-45	12	20-12	12	23-00	British	Cuban Sugar Co.	425.0	56.0	17.0	Hartford, Conn.	Vancouver, B. C.	Sugar	4,014	6,813	4,858
Nitokris	12	7-40	12	14-25	12	21-45	12	23-00	German	Hamburg-American Line	411.0	50.1	24.0	Hamburg, Germany	Valparaiso, Chile	General	3,484	6,652	4,704
Lagarto	12	7-43	12	14-40	12	22-32	13	3-52	British	Pacific Steam Nav. Co.	389.0	52.0	25.2	Hull, England	Corral, Chile	General	6,651	5,656	3,823
Vanderdijk	12	15-33	13	5-37	13	14-13	13	15-30	Dutch	Holland-American Line	466.4	58.4	19.5	Rotterdam, Holland	Vancouver, B. C.	General	1,379	8,515	6,060
Yonachichi ²	13	2-35	13	7-05	13	15-38	13	20-23	American	Roosevelt S. S. Co., S.B.	402.0	54.0	26.0	New York, N. Y.	Fremantle, Aust'lia	Asphalt, general	6,733	6,996	5,042
Horace	13	6-25	13	7-18	13	15-02	13	16-00	American	Luckenbach Line	445.0	58.0	21.0	Boston, Mass	Seattle, Wash.	General	3,724	8,699	6,363
Lukenbach	13	6-25	13	7-18	13	15-02	13	16-00	American	Luckenbach Line	445.0	58.0	21.0	Boston, Mass	Seattle, Wash.	General	3,724	8,699	6,363

⁴ Tug, towing barge.

³ Whaler.

² Motor ship.

¹ Tanker.

San Zoticio 1	13	12	15	13	13	12	25	13	19	54	13	21	20	British	Anglo-Mexican Oil Co.	400.0	52.0	26.2	Pt. Mexico, Mexico	Valparaiso, Chile	7,619	6,032	3,892
Varg 2	13	12	45	13	13	00	13	20	50	13	23	14	Norwegian	Standard Shipping Co.	390.6	55.2	18.0	Copenhagen, Den.	Talara, Peru	5,200	5,983	3,856	
Callandria	13	15	00	13	13	50	13	21	15	13	22	50	British	H. M. Thomson	400.0	52.0	25.0	Port Arthur, Tex.	Los Angeles, Calif	4,274	6,517	4,777	
El Lobo	13	15	00	13	15	10	13	21	54	14	00	02	British	Atlantic Refining Co.	385.2	51.0	20.6	Curacao, W. I.	Guayaquil, Ecuador	4,506	4,851	3,326	
Minister	13	15	58	13	20	10	14	9	04	14	10	05	Norwegian	Anglo-Saxon Pot. Co.	416.2	58.2	18.0	Newcastle, Eng'l.	Los Angeles, Calif	7,304	4,912		
Robert E.	14	00	10	14	6	35	14	13	32	14	14	40	American	Tidewater Oil Co.	424.0	58.2	22.0	New York, N. Y.	Los Angeles, Calif	7,333	5,182		
Hopkins 1	13	23	14	13	00	14	14	19	14	21	35	Belgian	Burmuth & Lembcke.	440.8	57.0	27.0	Amsterdam, Holl'd	Vancouver, B. C.	2,268	7,615	4,976		
Labrador 2	14	8	20	14	6	05	14	15	41	14	21	00	Danish	DuPont de Nemours.	380.8	54.0	17.3	Baltimore, Md.	Talcahuano, Chile	5,200	6,352	4,558	
Nedrol	14	9	25	14	9	35	14	16	24	14	17	40	American	Norton, Lilly & Co.	440.0	56.0	15.6	Baltimore, Md.	Everett, Wash.	2,068	8,312	6,097	
Hoffron	14	9	25	14	10	00	14	16	55	14	18	10	British	Witral Transport Co.	385.0	53.0	19.0	New York, N. Y.	Fremanite, Austral	2,968	5,131	3,661	
Witral	14	9	55	14	10	00	14	16	55	14	18	10	British	Witral Transport Co.	385.0	53.0	19.0	New York, N. Y.	Fremanite, Austral	2,968	5,131	3,661	
Tlaman 2	14	9	00	14	11	40	14	18	25	14	19	48	British	Canadian Transp. Co.	400.8	58.0	19.0	Corner Brook, N. F.	Los Angeles, Calif	4,060	6,903	5,185	
Sir Karl	14	12	05	14	12	30	14	19	30	14	23	22	Norwegian	Anglo-Saxon Pot. Co.	450.5	59.2	19.0	Rotterdam, Holl'd	Los Angeles, Calif	8,045	5,592		
Knutson 1	14	11	55	14	13	45	14	21	16	15	3	23	Norwegian	Scand. So. Pacific Co.	375.0	52.5	24.9	Stemstad, Nor'y	Corral, Chile	7,327	6,077	4,536	
Marie Bakke 2	3	14	50	14	13	10	14	21	17	14	21	30	Colombian	National Navigation Co.	107.2	22.0	11.3	Cristobal, C. Z.	Buenaventura, Col.	175	238	163	
Cauca 2	3	14	50	14	13	10	14	21	17	14	21	30	Colombian	National Navigation Co.	107.2	22.0	11.3	Cristobal, C. Z.	Buenaventura, Col.	175	238	163	
Pacific	3	14	50	14	13	10	14	21	17	14	21	30	Colombian	National Navigation Co.	107.2	22.0	11.3	Cristobal, C. Z.	Buenaventura, Col.	175	238	163	
Pioneer 2	13	5	55	14	14	00	14	22	01	14	23	00	British	Furness, Withy & Co.	435.9	60.5	18.3	Glasgow, Scotland	Vancouver, B. C.	996	9,630	6,943	
Vancouver	14	15	00	14	15	10	14	22	47	16	9	35	British	Sir W. R. Smith & Sons	415.0	55.0	25.0	Tampa, Fla.	Seikoshin, China	8,369	7,272	5,491	
City 2	14	9	45	14	18	15	15	9	36	15	10	59	American	Ore S. S. Corp.	550.3	72.2	22.2	Baltimore, Md.	Cruz Grande, Chile	15,551	4,297		
Maroc	14	21	40	15	6	15	15	13	39	15	14	50	American	Tidewater Oil Co.	421.4	58.2	22.0	New York, N. Y.	San Francisco, Cal.	7,333	5,182		
Paul Shoup 1	14	21	40	15	6	20	15	14	09	15	15	40	British	J. Jones	405.0	52.0	24.2	Barbados, B. W. I.	Vancouver, B. C.	7,000	7,333	4,071	
Cape Ortega	15	00	25	15	7	45	15	14	13	15	21	25	British	Imperial Oil Co.	440.8	57.6	22.6	Halifax, N. S.	Talara, Peru	7,555	5,049		
El Aleto 1 2	15	00	25	15	7	45	15	14	13	15	21	25	British	Imperial Oil Co.	440.8	57.6	22.6	Halifax, N. S.	Talara, Peru	7,555	5,049		
Hollywood	15	8	55	15	9	55	15	17	49	15	19	00	American	Pac.-Arg.-Brazil Line.	410.5	54.3	22.6	Rosario, Argentine	Los Angeles, Calif	5,476	6,554	5,031	
Canadian	15	1	00	15	11	00	15	18	40	15	19	45	British	Can. Nat. Steamships	400.3	52.4	23.1	Montreal, Canada	Adelaide, Australia	2,647	5,891	4,114	
Leader	15	13	15	15	13	25	15	20	29	16	7	16	British	Shaw, Savill & Albion.	482.0	64.0	22.1	Liverpool, England	Auckland, N. Z.	5,630	11,819	8,367	
Zealandie 2	15	3	20	15	14	30	15	21	00	15	21	00	American	U. S. Army	430.3	58.2	24.4	New York, N. Y.	Balboa, C. Z.	350			
St. Mihail 5	15	3	20	15	14	30	15	21	00	15	21	00	American	U. S. Army	430.3	58.2	24.4	New York, N. Y.	Balboa, C. Z.	350			
Gen. M. H.	15	16	40	15	17	05	16	9	34	16	10	50	American	Arrow Line	402.0	53.0	17.0	Baltimore, Md.	Seattle, Wash.	2,869	6,575	4,912	
Sherman	15	16	40	15	17	05	16	9	34	16	10	50	American	Arrow Line	402.0	53.0	17.0	Baltimore, Md.	Seattle, Wash.	2,869	6,575	4,912	
Lio 1	15	19	15	15	19	40	16	11	39	16	10	00	American	Standard Transp. Co.	431.0	59.0	18.3	Boston, Mass	Los Angeles, Calif	7,816	5,112		
Motor Sailor	15	19	15	15	19	40	16	11	39	16	10	00	American	Standard Transp. Co.	431.0	59.0	18.3	Boston, Mass	Los Angeles, Calif	7,816	5,112		
Canadian	15	21	40	16	6	15	16	13	10	16	14	15	British	Can. Nat. Steamships	400.0	52.0	18.6	Montreal, Canada	Vancouver, B. C.	2,000	5,893	4,182	
Seigneur	15	21	40	16	6	15	16	13	10	16	14	15	British	Can. Nat. Steamships	400.0	52.0	18.6	Montreal, Canada	Vancouver, B. C.	2,000	5,893	4,182	
Point Permin	16	2	00	16	7	09	16	14	17	16	15	35	American	Swayne & Hoyt	324.0	46.2	17.6	Corpus Christi, Tex	San Francisco, Cal.	2,364	3,984	2,617	
Tacoma	14	22	45	16	10	34	16	17	00	16	20	52	German	Hamburg-American Line	477.0	61.0	21.0	Hamburg, Germany	Tacoma, Wash.	3,752	10,277	7,304	
Gasia 2	16	10	05	16	10	50	16	18	02	16	19	00	Norwegian	Isbrandt-Moller	360.5	40.1	20.9	Baltimore, Md.	Manila, P. I.	5,400	5,101	3,735	
Corinto	7-1	21	40	16	11	16	19	16	40	20	05	American	Panama Mail S. C.	261.1	40.0	15.0	Cristobal, C. Z.	San Francisco, Cal.	6,100	2,352	1,549		
San Mateo	15	13	00	16	12	05	16	19	30	16	20	40	Norwegian	United Fruit Co.	315.2	44.2	18.9	Cristobal, C. Z.	San Francisco, Cal.	260	3,496	2,141	
Bautia	16	8	00	16	12	10	16	19	36	16	20	40	Norwegian	William Hausen	270.1	38.1	10.3	Pt. Colombia, Col.	Callao, Peru	1,906	1,189		
Kallisto 6	16	10	20	16	13	20	17	9	16	17	10	30	British	L. D. Mitchell	163.0	28.5	15.0	New York, N. Y.	Los Angeles, Calif	454	328		
Colombian	16	19	30	16	19	50	17	21	34	17	21	34	Panamanian	Hugh Craggs	404.0	54.0	21.2	Boston, Mass	Portland, Oreg	3,043	6,760	4,450	
Kuyak	16	19	30	16	19	50	17	21	34	17	21	34	Panamanian	Hugh Craggs	404.0	54.0	21.2	Boston, Mass	Portland, Oreg	3,043	6,760	4,450	
Kuyak	16	19	30	16	19	50	17	21	34	17	21	34	Panamanian	Hugh Craggs	404.0	54.0	21.2	Boston, Mass	Portland, Oreg	3,043	6,760	4,450	
Kuyak	16	19	30	16	19	50	17	21	34	17	21	34	Panamanian	Hugh Craggs	404.0	54.0	21.2	Boston, Mass	Portland, Oreg	3,043	6,760	4,450	

1 Tanker.

5 Transport.

6 Yacht.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Jane West 7	9	8, 28	9	7, 56	10	15, 00	10	15, 00	Panamanian	United Fruit Co.	416 8	56 1	26 0	Balboa, C. Z.	Gainn Lake, C. Z.	Gasoline.	7, 473	6, 925	5
New Jersey 7	10	4, 25	10	6, 09	10	13, 35	10	13, 35	American	The Texas Co.	351 3	51 4	24 0	Los Angeles, Calif.	Providence, R. I.	Lumber.	3, 778	3, 944	3, 518
Bryne 8	9	19, 40	10	6, 50	10	14, 10	10	14, 10	Norwegian	Aus'lan Dispatch Line	431 0	43 2	16 2	Englewood, B. C.	Boston, Mass.	General	1, 004 1	2, 874	1, 944
Guayquil	10	4, 10	10	7, 06	10	14, 05	10	21, 27	American	Panama R. R. S. S. Line	431 0	43 2	16 2	Guayaquil, Ecuador	New York, N. Y.	General	1, 004 1	2, 874	1, 944
Cities Service	10	6, 50	10	7, 56	10	15, 00	10	15, 00	American	Cities Ser. Transp. Co.	489 0	62 7	27 0	Los Angeles, Calif.	New York, N. Y.	Gasoline	9, 298	8, 083	5, 947
Oklahoma	10	7, 20	10	8, 36	10	16, 35	10	16, 35	American	Standard Oil Co., N. Y.	469 0	62 7	27 0	Los Angeles, Calif.	Boston, Mass.	Gasoline	9, 298	8, 083	5, 947
Java Arrow	10	00, 55	10	9, 13	10	17, 35	10	17, 35	American	McCormick S. S. Co.	409 6	54 1	25 0	Seattle, Wash.	Baltimore, Md.	Lumber, general	7, 831	9, 027	4, 993
Alsaroka	10	4, 35	10	10, 08	10	18, 50	11	1, 10	British	Royal Mail S. S. Co.	333 1	54 3	14 5	Vancouver, B. C.	Rotterdam, Holland	General	7, 831	9, 027	4, 993
Nebraska	10	5, 20	10	10, 17	10	18, 25	10	22, 45	German	North German Lloyd	333 1	54 3	14 5	Valparaiso, Chile	Bremen, Germany	Ballast	6, 030	6, 952	3, 632
Angar	10	15, 00	10	16, 18	11	11, 00	11	11, 00	Swedish	Axel Brostrom & Son	424 2	56 2	25 3	Olympia, Wash.	Antwerp, Belgium	Lumber	6, 030	6, 952	3, 632
Fernia 8	10	15, 00	10	16, 18	11	11, 00	11	11, 00	Swedish	Axel Brostrom & Son	424 2	56 2	25 3	Olympia, Wash.	Antwerp, Belgium	Lumber	6, 030	6, 952	3, 632
Seminole 8	10	20, 10	11	6, 39	11	13, 35	11	15, 00	British	Anglo-American Oil Co.	385 5	55 0	27 4	Los Angeles, Calif.	Ellesmere Pt., Eng	Gasoline	9, 291	7, 012	5, 022
Chickasaw	10	9, 15	11	7, 10	11	15, 05	11	15, 05	American	Isthmian S. S. Lines	385 5	55 0	27 4	Kahului, T. H.	Baltimore, Md.	Sugar	8, 571	7, 321	5, 237
Santa Tecla	10	0, 55	11	7, 22	11	15, 45	12	3, 35	American	N. O. & S. S. Co.	298 6	40 0	21 0	Talcahuano, Chile	New Orleans, La.	General	3, 770	2, 832	1, 803
East Lynn 8	10	23, 30	11	7, 36	11	16, 10	11	16, 10	British	Sir W. R. Smith & Sons	401 1	54 3	24 1	N. Westm ter, B. C.	Preston, England	General	6, 750	6, 784	3, 107
Emil Kirdorf	11	6, 15	11	8, 08	11	16, 35	12	00, 05	German	Hamburg-American Line	409 8	53 8	23 0	Corral, Chile	Hamburg, Germany	Saltpeeter, general	6, 695	7, 141	4, 468
Steel Trader	11	4, 55	11	8, 41	11	17, 35	11	22, 30	American	Isthmian S. S. Lines	424 2	56 2	25 3	Vancouver, B. C.	London, England	General	7, 531	7, 631	3, 450
Santoro	11	12, 00	11	12, 45	11	20, 40	11	20, 40	American	Ore S. S. Corp	449 1	57 2	29 0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	11, 319	7, 809	5, 139
Henry S.	11	15, 00	11	16, 38	12	11, 00	12	11, 00	American	Argonaut S. S. Co.	404 6	53 9	25 0	Everett, Wash.	Pt. Newark, N. J.	Lumber	6, 300	6, 755	4, 688
Cape of Good Hope 8	11	17, 00	11	17, 34	12	12, 15	12	14, 15	British	Loyle Shipping Co.	405 0	52 0	25 0	Seattle, Wash.	Avonmouth, Eng	General	7, 200	.....	.....
Charles E.	12	6, 10	12	6, 10	12	14, 35	12	14, 35	American	Huasteca Petroleum Co.	320 0	45 1	14 0	Balboa, C. Z.	Aruba, D. W. I.	Ballast	.....	3, 295	2, 235
Harwood 7	11	21, 50	12	6, 40	12	13, 15	12	13, 15	American	Loekembach Line	436 0	57 0	24 0	Seattle, Wash.	Mobile, Ala.	Sugar, general	4, 610	8, 543	6, 402
Julia	11	23, 15	12	7, 15	12	18, 30	12	18, 30	British	R. Chapman & Son	390 0	53 5	25 0	Portland, Oreg	Cobh, Ireland	Wheat	8, 248	5, 612	4, 119
Lukenbach.	11	21, 50	12	6, 40	12	13, 15	12	13, 15	American	Loekembach Line	436 0	57 0	24 0	Seattle, Wash.	Mobile, Ala.	Sugar, general	4, 610	8, 543	6, 402
Carlton	11	23, 15	12	7, 15	12	18, 30	12	18, 30	British	R. Chapman & Son	390 0	53 5	25 0	Portland, Oreg	Cobh, Ireland	Wheat	8, 248	5, 612	4, 119
Edward	12	1, 00	12	8, 03	12	18, 00	12	18, 00	American	Loekembach Line	436 6	57 2	26 0	Seattle, Wash.	Boston, Mass	General, lumber	6, 042	8, 543	6, 427
Lukenbach.	12	2, 27	12	8, 31	12	19, 05	12	19, 05	American	Amer.-Hawaiian Line	445 1	59 8	22 0	Portland, Oreg	Boston, Mass	General	5, 101	8, 567	6, 020
California 8	12	3, 25	12	9, 00	12	19, 30	12	19, 30	British	Nederal Steam Nav. Co.	473 0	60 1	23 0	N. Plymouth, N. Z.	Glasgow, Scotland	General	5, 063 1	10, 423	7, 456
Westmoreland.	12	6, 20	12	9, 32	12	20, 35	13	16, 40	German	North German Lloyd	360 6	51 0	20 0	Antofagasta, Chile	Bremen, Germany	General	5, 710	4, 791	3, 392
Pacific Grove	12	11, 55	12	12, 26	12	20, 30	12	20, 30	British	Furness, Withy & Co	400 4	53 8	27 3	Ancoveur, B. C.	London, England	General	7, 986	10, 086	7, 226
Cape Verde.	12	11, 55	12	12, 26	12	21, 25	12	22, 35	British	Furness, Withy & Co	400 4	53 8	27 3	Ancoveur, B. C.	London, England	General	7, 986	10, 086	7, 226
Calgarothie 8	12	10, 15	12	12, 56	13	11, 15	13	11, 15	British	Imperial Oil Co., Ltd	321 3	70 3	31 2	Talara, Peru	Montreal, Canada	Crude oil	16, 500	12, 339	7, 717
Labore.	13	00, 35	13	6, 05	13	15, 25	13	15, 25	American	Ore S. S. Corp	549 6	72 2	34 0	Cruz Grande, Chile	New York, N. Y.	Iron ore	29, 000	14, 325	4, 655
Huguenot 7	13	1, 30	13	7, 01	13	18, 25	13	18, 25	American	Richfield Oil Co.	484 8	56 2	26 0	Los Angeles, Calif.	New York, N. Y.	Gasoline	9, 124	7, 394	5, 099

10 Grain, lumber, and nitrates.

11 Lumber, and canned goods.

12 Motor ship.

13 Tanker.

14 Lumber, and canned goods.

Ship	12	22	25	13	7	05	13	7	15	13	17	15	British	Donaldson Line	425	0	56	0	20	3	Vancouver, B. C.	Glasgow, Scotland	General	7,871	7,827	5,429
West																										
Loquassuck	12	17	40	13	7	47	13	18	55	13	18	55	American	Roosevelt S. S. Co., S. B.	409	6	54	2	22	0	Wyhalls, Australia	Baltimore, Md.	(*)	6,283	6,644	4,910
Clan Ross	13	4	15	13	7	59	13	19	25	13	19	25	British	Clan Line Steamers	430	0	54	3	24	0	Calcutta, India	Liverpool, England	(*)	6,170	6,652	4,683
Archer	12	21	45	13	12	54	13	20	50	13	23	40	American	Roosevelt S. S. Co., S. B.	457	0	56	0	21	0	Iloilo, P. I.	New York, N. Y.	(*)	5,442	8,315	6,100
San Diego	13	13	00	13	13	59	13	13	59	13	21	05	American	Pacific-Atlantic S. S. Co.	376	4	52	3	19	5	Aberdeen, Wash.	Baltimore, Md.	(*)	4,210	5,455	3,879
Charles H.	13	13	15	13	14	20	13	21	35	13	21	35	American	Argonaut S. S. Co.	404	6	53	9	25	0	Seattle, Wash.	Baltimore, Md.	(*)	6,312	6,755	4,750
Clump	13	7	00	14	6	19	14	13	15	13	7	10	American	Panama Mail S. S. Co.	380	0	48	7	19	0	San Francisco, Cal.	New York, N. Y.	(*)	2,923	6,015	4,281
Samuel Q.	14	1	10	14	6	47	14	14	40	14	14	40	American	Tidewater Oil Co.	424	4	58	2	26	0	Los Angeles, Calif.	New York, N. Y.	(*)	9,288	7,333	5,183
Flotbek	14	18	45	14	19	38	15	11	40	16	2	40	German	Knorr & Burchard	279	6	40	8	19	0	Yavros, Mexico	Bilbao, Spain	(*)	2,750	2,221	1,469
San Mateo	14	14	40	15	6	20	15	13	00	16	12	05	American	United Fruit Co.	315	2	44	2	20	0	San Francisco, Cal.	Cristobal, C. Z.	(*)	657	3,496	2,141
Dorothy	14	22	05	15	6	57	15	14	15	15	14	15	American	Arrow Line	410	0	54	2	25	0	Portland, Ore.	New York, N. Y.	(*)	7,190	6,579	4,810
Nebaskan	14	22	15	15	7	17	15	15	15	15	15	15	American	Amer.-Hawaiian Line	471	2	59	1	21	2	Seattle, Wash.	Boston, Mass	(*)	6,481	9,632	6,638
Planet	15	6	00	15	7	58	15	15	30	15	17	00	German	F. Laeisz	450	7	57	2	23	0	Valparaiso, Chile	Azores	(*)	8,580	7,409	5,234
Lancaster	15	10	35	15	11	12	15	18	15	18	15	18	American	Argonaut S. S. Co.	434	3	57	2	25	0	Longview, Wash.	Baltimore, Md.	(*)	8,495	7,935	5,841
Lautaro	8	4	20	16	6	25	16	14	45	17	11	18	British	Pacific Steam Nav. Co.	399	1	52	7	25	0	Valparaiso, Chile	Havre, France	(*)	5,850	6,759	4,840
Atlantic	15	21	00	16	7	06	16	17	15	16	17	15	American	Standard Oil Co. of Cal.	415	0	54	3	24	0	Kakuli, T. H.	New Orleans, La.	(*)	7,508	6,567	4,917
S. C. T. Doid	15	6	00	16	7	06	16	17	15	16	17	15	American	Argonaut S. S. Co.	420	0	57	2	28	0	San Francisco, Cal.	Paulsboro, N. J.	(*)	9,194	7,481	4,975
Sanna Clara	16	6	45	16	8	00	16	18	05	16	19	15	American	Penn. Shipping Co.	425	8	63	9	25	0	Valparaiso, Chile	New York, N. Y.	(*)	3,422	11,680	7,442
Meton	16	6	45	16	8	53	16	18	16	18	16	18	American	Charles Nelson & Co.	324	0	46	2	22	0	Los Angeles, Calif.	New York, N. Y.	(*)	9,200	7,484	5,212
Chetopa	16	4	00	16	9	25	16	18	42	16	18	42	American	Swayne & Hoyt	324	0	46	2	22	0	San Francisco, Cal.	Baltimore, Md.	(*)	4,600	3,984	2,628
Point Arena	16	11	30	16	12	16	16	20	10	16	22	40	American	Dimon S. S. Corp.	379	5	54	3	25	0	Seattle, Wash.	New Orleans, La.	(*)	3,655	3,984	2,612
Pacific Pine	16	13	25	16	14	02	16	21	15	16	21	15	American	Redwood Line, Inc.	419	9	53	1	23	0	Seattle, Wash.	New Orleans, La.	(*)	6,836	6,583	4,808
Delight	16	13	25	16	14	02	16	21	15	16	21	15	American	Redwood Line, Inc.	419	9	53	1	23	0	Seattle, Wash.	New Orleans, La.	(*)	6,014	5,667	4,103

1 Tanker.

13 Mangrove ore, lumber, and general.

14 Sugar, lumber, and molasses.

15 General, gasoline, and explosives.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Ship	Date	Vessel	Line	From—	Date	Vessel	Line	For—
August 10	Waunna	Standard Fruit & S. S. Co.	Pan American Airways	Pto. Cabezas, Nicaragua.	August 10	No. 9670 ¹⁶	Pan American Airways	San Salvador via waypoints.
August 10	Calamares	United Fruit Co.	United Fruit Co.	Port Limon, Costa Rica.	August 10	Magdalena	Hamburg-American Line	Hamburg via waypoints.
August 10	Inapaquina ¹⁷	Pan American Airways	Pan American Airways	Talara via waypoints.	August 10	Calamares	United Fruit Co.	New York via Habana.
August 10	Annetta I. ¹⁷	A. Tagaropolis	A. Tagaropolis	Colon, Rep. of Panama.	August 10	Paraimina	United Fruit Co.	New Orleans and way pts.
August 11	Toloca	United Fruit Co.	United Fruit Co.	Colon, Rep. of Panama.	August 10	No. 9137 ¹⁶	Pan American Airways	Miami via waypoints.
August 11	No. 9165 ¹⁶	Pan American Airways	Pan American Airways	New York via Habana.	August 11	Inapaquina ¹⁷	A. Tagaropolis	Colon, Rep. of Panama.
August 11	Darien C-35 ¹⁶	Seattle Airplane Co.	Pan American Airways	San Salvador via waypoints	August 11	Annetta I. ¹⁷	A. Tagaropolis	Colon, Rep. of Panama.
August 12	Dramatist	T. & J. Harrison	Royal Netherlands S. S. Co.	Barraquilla and waypoints	August 11	Toloca	United Fruit Co.	Port Limon and Bocas
August 12	No. 945-M ¹⁶	Pan American Airways	Pan American Airways	Liverpool via waypoints.	August 11	Waunna	Standard Fruit & S. S. Co.	Pto. Cabezas, Nicaragua.
August 12	Pearl Marie ¹⁸	G. I. Bryan	Royal Netherlands S. S. Co.	Austerdam via waypoints.	August 12	Pearl Marie ¹⁸	Van Rensselaer	Bluefields, Nicaragua.
August 12	Anachucuna ¹⁷	Pan American Airways	Pan American Airways	Talara via waypoints.	August 13	Dramatist	T. & J. Harrison	Port Limon, Costa Rica.
August 12	Chetopa	United Fruit Co.	United Fruit Co.	Colon, Rep. of Panama.	August 13	Cavina	Elders & Fyfes Line	New Orleans, La.
August 13	Delight	Elders & Fyfes Line	Elders & Fyfes Line	Avonmouth via waypoints.	August 13	Toloca	United Fruit Co.	Avonmouth via waypoints.

* Other than ships passing through the Canal.

¹⁶ Air mail carrier.

¹⁷ Motor boat.

¹⁸ Motor schooner.

* DEPARTURES.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.			* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	To—
August 13	Ancon	Panama R. R. S. S. Line	New York via Haiti,	August 13	V-311 ¹⁹	J. W. Miller	San Andrea, Colombia.
August 13	Swiftlight	Shell Oil Co.	Curacao, D. W. I.	August 13	No. 9664 ²⁰	Pan American Airways	San Salvador and waypts.
August 13	Santa Marta	United Fruit Co.	New York via Kingston.	August 13	No. 142-M ²⁰	Pan American Airways	Miami via wayports.
August 13	Irona	United Fruit Co.	New Orleans, La.	August 14	Swiftlight	Shell Oil Co.	Curacao, D. W. I.
August 13	No. 9776 ²⁰	Pan American Airways	Miami via wayports.	August 14	No. 144-M ²⁰	Pan American Airways	Maracaibo via wayports.
August 13	No. 9670 ²⁰	Pan American Airways	San Salvador via waypts	August 14	Santa Marta	United Fruit Co.	New York via wayports.
August 13	Bollasco	Aluminium Line	Tampa via wayports.	August 14	Bollasco	Aluminium Line	Curacao, D. W. I.
August 13	H. H. Rogers	Standard Shipping Co.	Baytown, Tex.	August 14	Irona	United Fruit Co.	Pto. Colombia and waypts.
August 13	Maxwell Newhall	Maxwell Newhall	Cartagena, Colombia.	August 15	No. 9685 ²⁰	Pan American Airways	San Salvador and waypts.
August 14	Passero	Gouge Brothers	Fort Limon, Costa Rica.	August 15	H. H. Rogers	Standard Shipping Co.	Cartagena, Colombia.
August 14	Daytonian	Colombian S. S. Line	Gienhuigos, Cuba.	August 15	Daytonian	Colombian S. S. Line	Santa Marta, Colombia.
August 14	Bogota	Spanish Line	New York via wayports.	August 15	C. C. Acme ²¹	Maxwell Newhall	New York, N. Y.
August 14	Mannul Armus	Atlantida	Barcelona and wayports.	August 15	C. C. Acme ²¹	Maxwell Newhall	Colon, Rep. of Panama.
August 15	Van Rensselaer	Royal Netherlands S. S. Co.	New Orleans, La.	August 15	Durien C-35 ²⁰	Scadta Airplane Co.	Barranquilla and waypts.
August 15	Tela	United Fruit Co.	Port Limon, Costa Rica.	August 15	Inapaquina ¹⁹	A. Tagaropoulos	Colon, Rep. of Panama.
August 15	Inapaquina ¹⁹	A. Tagaropoulos	Bocas, Rep. of Panama.	August 15	Annetta I. ¹⁹	A. Tagaropoulos	Colon, Rep. of Panama.
August 15	Annetta I. ¹⁹	A. L. Surgeon	Colon, Rep. of Panama.	August 16	Tela	United Fruit Co.	New Orleans and waypts.
August 16	Dora K. ²²	Diez & Garcia	Colon, Rep. of Panama.	August 16	Van Rensselaer	Royal Netherlands S. S. Co.	Amsterdam and wayports.
August 16	Nueva Espana ¹⁹	Pan American Airways	Colon, Rep. of Panama.	August 16	Atlantida	Standard Fruit & S. S. Co.	New Orleans and wayports.
August 16	No. 144-M ²⁰	Pan American Airways	Colon, Rep. of Panama.	August 16	Mannul Armus	Spanish Line	Barcelona and wayports.
August 16	Heredia	United Fruit Co.	Maracaibo via wayports.	August 16	Dora K. ²²	A. L. Surgeon	Bluefields and Limon.
August 16	No. 142-M ²⁰	Pan American Airways	New Orleans and Habana.	August 16	Nueva Espana ¹⁹	Diez & Garcia	Colon, Rep. of Panama.
August 16	No. 9664 ²⁰	Pan American Airways	Miami via wayports.				
August 16	No. 300-N ²⁰	Pan American Airways	San Salvador and waypts.				
			Talara via wayports.				

¹⁹ Motor boat. ²⁰ Air mail carrier. ²¹ Schooner. ²² Motor ship.

PORT OF BALBOA.

August 11	Montebello ¹	Union Oil Co. of Calif.	Los Angeles, Calif.	August 13	Real ²³	Hans Elliot	Panama Bay, R. P.
August 12	Guardian	All America Cables, Inc.	Callao, Peru.	August 13	Montebello ¹	Union Oil Co. of Calif.	Los Angeles, Calif.
August 14	Dos Hermanos ²³	H. Valdez	Panama Bay, R. P.	August 13	Guardian	All America Cables, Inc.	Puntarenas, Costa Rica.
August 14	Sambu	Hans Elliot	Panama Bay, R. P.	August 14	Dos Hermanos ²³	H. Valdez	Panama Bay, R. P.
August 15	Real ²³	Hans Elliot	Panama Bay, R. P.	August 15	Sambu	Hans Elliot	Panama Bay, R. P.
				August 15	Real ²³	Hans Elliot	Panama Bay, R. P.
				August 17	Locum ¹	Imperial Oil Co., Ltd.	Talara, Peru.

¹ Tanker. ²³ Motor schooner.

* Other than ships passing through the Canal.

Cargo Through the Canal During July, 1930.

On pages 34 and 35 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in July, 1930. This cargo, segregated according to direction, as compared with July, 1929, and the differences, is shown in the following tabulation:

	July, 1929.	July, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	909,976	575,964	-334,012
Pacific to Atlantic.....	1,688,186	1,826,083	+137,897
Total.....	2,598,162	2,402,047	-196,115

It will be noted from the above that the Atlantic to Pacific tonnage decreased 334,012 tons, or 36.7 per cent, as compared with July, 1929, and that from the Pacific to Atlantic increased 137,897 tons, or 8.2 per cent, making a total decrease of cargo tonnage in both directions of 196,115 tons, or 7.5 per cent. The heavy decrease from the Atlantic was accounted for by curtailment in shipments of several important commodities as indicated under "Principal commodities," most notably manufactured iron and steel, mineral oils, and cement. The increase from the Pacific was due to large gains in mineral oils, iron ore, wheat, and cold storage cargo, offset to a large extent by decreases in lumber, nitrates, and metals.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-four and one-tenth per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 23.6 per cent in Europe. Tonnage from the United States decreased 237,032 tons, or 38.1 per cent, as compared with July, 1929, and the proportion to the total in July, 1930, was slightly lower. The amount originating in Europe decreased 102,348 tons, or 42.9 per cent, and the percentage of the whole was lower in July of this year.

Destination.—Forty-four and four-tenths of the Pacific-bound tonnage was destined to the United States; 14.4 per cent to South America; 20.7 per cent to Asia; and 11.5 per cent to Australasia. Cargo tonnage to all these areas declined as compared with July, 1929, in actual tonnage as follows: To the United States, 182,975, or 41.7 per cent; to South America, 49,369, or 37.2 per cent; to Australasia, 57,799, or 46.7 per cent, and to Asia, 48,560 tons, or 29.0 per cent. In point of the relation of cargo destined to the aforementioned areas to the total tonnage in this direction, that to the United States, South America, and Australasia decreased, while that to Asia showed a gain.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 58.4 per cent came from the United States; 22.1 per cent from South America; 8.9 per cent from Canada; 5.9 per cent from Asia; and 3.8 per cent from Australasia. As compared with the corresponding month a year ago, tonnage from the United States increased 121,794 tons, or 12.9 per cent, and the percentage of the total was higher in July, 1930. Cargo tonnage from South America decreased 28,122 tons, or 6.5 per cent, and also showed a reduced percentage in its relation to the total cargo.

Tonnage from Canada increased 22,298 tons, or 14.9 per cent, with an increase in the percentage of the total. Asia showed a cargo decrease of 2,593 tons, or 2.4 per cent, while Australasia showed an increase of 24,130 tons, or 54.2 per cent. Asia showed a decrease in its percentage of the total cargo and Australasia an increase. The increase in cargo tonnage from the United States was principally due to mineral oils. The decrease from South America was caused by lessened nitrate shipments. The gain from Canada was due to wheat shipments and that from Australasia to shipments of iron ore from Australasia to the east coast of the United States, and an increase in cold storage cargo from New Zealand.

Destination.—Segregated according to destination, 59.8 per cent of the cargo in this direction went to the United States, and 32.5 per cent to Europe. Tonnage to the United States decreased in its proportion to the total tonnage, but showed an increase in actual tonnage of 48,630 tons, or 4.7 per cent. That to Europe increased 45,294 tons, or 8.3 per cent, while its relation to the total cargo remained the same.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify 82.5 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 17.5 per cent consists, for the most part, of manufactured articles in small lots reported as "General cargo."

Atlantic to Pacific-bound commodities, which aggregated more than 10,000 tons for July, 1929, or July, 1930, are listed in the following tabulation, showing differences:

Commodity.	July, 1929.	July, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia.....	12,368	3,165	-9,203
Automobiles.....	22,881	11,296	-11,585
Cement.....	38,331	16,773	-21,558
Coal and coke.....	23,637	12,331	-11,306
Cotton.....	10,559	4,629	-5,930
Manufactured goods:			
Iron and steel.....	230,916	108,973	-121,943
Machinery.....	14,979	10,720	-4,259
Railroad material.....	29,294	8,082	-21,212
Textiles.....	11,948	6,099	-5,849
Tinplate.....	15,555	15,257	-298
Miscellaneous.....	15,492	7,320	-8,172
Metal, scrap (principally iron).....	8,318	20,029	+11,711
Oils, mineral.....	62,050	37,323	-24,727
Paper.....	22,038	17,483	-4,555
Phosphates.....	32,638	23,771	-8,867
Sugar.....	15,108	14,895	-213
Sulphur.....	29,485	15,662	-13,823

The above 17 commodity groups comprise 58.0 per cent of the cargo moving from the Atlantic to the Pacific during July, 1930. All of the items except scrap metal show decreases as compared with July, 1929. The largest decline was in manufactured iron and steel.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify 98.6 per cent of all cargo moving from the Pacific to Atlantic during the month of July, 1930. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1929 are listed below:

Commodity.	July, 1929.	July, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	
Barley.....	24,625	13,958	-10,667
Canned goods (fish, fruit, vegetables, etc.).....	38,527	44,254	+5,727
Cold storage (food products).....	18,306	34,331	+16,025
Lumber.....	348,814	279,522	-69,292
Metals, various.....	58,560	41,040	-17,520
Nitrates.....	143,664	64,204	-79,460
Oils, mineral.....	455,333	689,753	+234,420
Ores (principally iron).....	173,437	220,492	+47,055
Pulp.....	10,053	8,047	-2,006
Rice.....	10,993	12,248	+1,255
Sugar.....	113,644	111,628	-2,016
Wheat.....	107,888	134,285	+26,397
Wool.....	10,497	15,919	+5,422

¹ Fresh fruit not included.

The above 13 commodity groups comprise 91.4 per cent of the cargo moving from the Pacific to the Atlantic during July, 1930. Seven of the items show increases and 6 decreases. Mineral oils, iron ores, and wheat showed the greatest increases, while lumber, nitrates, and metals decreased heavily.

(Continued on next page.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending August 9, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Santa Barbara.....	Grace Line.....		August 3		233
Cristobal.....	Panama R. R. S. S. Line.....		August 3		978
Ludwigshafen.....	North German Lloyd.....		August 3		192
Zenon.....	French Line.....		August 3		62
Cartago.....	United Fruit Co.....		August 3		72
Cerigo.....	Hamburg-American Line.....		August 3		205
Ulna.....	United Fruit Co.....	August 3	August 3	35	71
Cauca.....	National Navigation Co.....	August 3	August 3	78	
Durazzo.....	Hamburg-American Line.....	August 3	August 3	566	
Australien.....	Danish-East Asiatic Co.....	August 3	August 3	245	307
Dorelian.....	Leyland S. S. Line.....	August 3	August 4	665	(²)
Baralt.....	Royal Netherlands S. S. Co.....		August 4		54
Los Angeles.....	Hamburg-American Line.....		August 4		667
Barneveld.....	Royal Netherlands S. S. Co.....	August 4	August 5	130	72
Baarn.....	Royal Netherlands S. S. Co.....	August 4	August 5	223	66 ¹
Calamares.....	United Fruit Co.....	August 4	August 6	594	15
Santa Teresa.....	Grace Line.....	August 5	August 5	112	(⁴)
Annie Johnson.....	Johnson S. S. Line.....	August 5	August 6	(¹)	257
Wiegand.....	North German Lloyd.....	August 5	August 6	240	51
Magdalena.....	Hamburg-American Line.....	August 5	August 6	65	(²)
Theo. Roosevelt.....	Fred Olsen Line.....	August 5	August 6	(¹)	72
Tela.....	United Fruit Co.....	August 6	August 6	566	22 ¹
Teno.....	Chilean Line.....	August 6	August 6	54	(²)
San Felipe.....	States S. S. Co.....	August 6	August 6	5	(²)
Santa Maria.....	Grace Line.....	August 6	August 6	97	103
Zacapa.....	United Fruit Co.....	August 6	August 7	245	88
Swiftwind.....	C. D. Mallory & Co.....	August 6	August 7	11,079	(²)
Alemania.....	Hamburg-American Line.....		August 7		60
Castilla.....	United Fruit Co.....	August 6	August 9	29	272
Cid.....	Pacific Steam Navigation Co.....	August 7	August 7	103	(²)
Nosa Queen.....	N. O. & S. A. S. S. Co.....	August 7	August 8	244	154 ¹
Baracoa.....	Colombian Line.....	August 7	August 8	152	295
Pellerin de la Touche.....	French Line.....	August 7	August 9	124	438
Acajutla.....	Pacific Steam Navigation Co.....		August 8		1,026
Amapala.....	Standard Fruit S. S. Co.....	August 8	August 9	182	388
Manizales.....	North German Lloyd.....	August 8	August 9	718	
Salvador.....	Pacific Steam Navigation Co.....	August 8	August 8	205	
Washington.....	French Line.....	August 9	August 9	33	
Tela.....	United Fruit Co.....		August 9	(¹)	
Hague Maru.....	Osaka Shosen Kaisha.....	August 9	August 9	71	(²)
Chas. E. Harwood.....	Huasteca Petroleum Co.....	August 9	August 9	1,259	
Parismina.....	United Fruit Co.....	August 9	August 9	76	

¹ No cargo discharged

² No cargo laded.

³ 40 pounds.

⁴ 2 packages.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, July, 1930.

(Figures represent tons of 2,240 pounds.)

FROM—	NORTH AMERICA.										EUROPE.										Grand total.	Per cent of total cargo.			
	UNITED STATES.					NORTH AMERICA.					EUROPE.					EUROPE.									
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.	East coast of Cen- tral America.	Cristobal, C. Z.	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Union of Soviet Republics.	Spain and Portugal.	Europe. ¹			Total, Europe.	East coast of South America.	Egypt.
NORTH AMERICA:																									
W. coast of U. S.	638,039	1,692,43	8,086	683,667	10,155,058	49,567	748,302	176,662	2,218	18,262	3,426	10,904	165,1,400	100,7,786	99,064	312,101	8,057	1,068,460	58.4						
W. coast Canada	20,295	10		20,305	35,015	78,485	1,029	900	974	4,753	7,549	100,7,786	39	25,922	127,489	777	163,281	8.9							
W. coast of C. A.	20,849			20,849	25	2,276	186	2,886	42	340							3,446	0.2							
Hawaiian Islands.	12,078	136		12,214	12,214													12,214	0.7						
Total, N. A.	671,661	1,692,43	8,122	716,535	10,155,058	49,567	748,302	176,662	2,218	18,262	3,426	10,904	165,1,400	100,7,786	99,064	312,101	8,057	1,068,460	58.4						
SOUTH AMERICA:																									
Chile.....	207,017		1,795	208,812			389	1,845	211,046	16,527	15	1,772	8,478	54	273	584	20,845	27,765	76,313	10					
Colombia.....	1,492		48	1,540			3,469		5,009																
Ecuador.....	14,624			14,624			2,823		17,447	15	45	71	5	66	916					1,118	15				
Peru.....	29,307			29,307			1,888		57,814	4,619	78,2,373	11,596	2,174	50						8,621	29,511				
West coast S. A.	2,068			2,068			1,580		3,648	91					142					1,264	1,497				
Total, S. A.	254,508	1,843		256,351	28,319		8,449	1,845	294,964	21,252	78,2,433	1,843	20,079	2,294	1,381	584	20,845	37,650	108,439	25					
AUSTRALASIA:																									
Australia.....	21,292			21,292	316				21,608																
New Zealand.....	828			828	2,360		28		3,216	40,137										40,137					
Australasia¹.																									
Total, Australasia	22,120			22,120	2,676		28		24,824	40,158										43,844					
ASIA:																									
Philippine Islands	71,761		15,404	87,165					87,165																
China.....	6,086		165	6,251			1,341	7,200	14,792	850										850					
Japan.....	2,680			2,680			94		2,774																
Far East ¹	817		188	1,005					1,005																
Total, Asia	81,344		15,757	97,101			1,435	7,200	105,736	850										850					
Grand total.	1,029,633	1,692,43	8,122	1,092,107	43,066		35,271	281,602	1,223,891	317,443	3,316	3,333	24,807	28,598	20,747	1,685	9,770	20,845	162,789	583,333	8,859				
Per cent of total cargo:																									
July, 1930.....	56.4	0.1	3.3	59.8	2.3		1.5	3.4	67.0	17.3	0.2	0.2	1.3	1.5	1.1	0.1	0.5	1.4	8.9	32.5	0.5				
July, 1929.....	54.4	1.2	6.2	61.8	2.2		0.6	2.2	66.8	16.7	1.2	0.1	1.3	1.7	0.7	0.3	0.1	0.4	10.0	32.5	0.2	0.5			
July, 1928.....	56.4	1.0	2.9	60.3	2.7	0.8	1.6	1.5	66.9	17.2	1.9	0.1	1.3	2.4	0.8	0.2	0.7	0.4	6.9	31.9	0.2	1.0			

¹ General cargo not routed so as to allow segregation between definite ports. ² Includes both local and transit cargo.

United States Intercoastal Traffic by Commodities for July, 1930.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for July, 1930, and the totals for July, 1929 and 1928. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Agricultural implements.....	465	97	562
Alfalfa.....		304	304
Alfalfa meal.....		583	583
Ammonia.....	25		25
Automobiles.....	3,787	120	3,907
Automobile accessories.....	885	167	1,052
Bark:			
Cascara.....		53	53
Other.....		384	384
Barley.....		22	22
Beans.....		1,541	1,541
Borax.....	77	1,413	1,490
Bricks.....	100		100
Burlap.....	21	42	63
Calcium carbide.....	60		60
Camphor.....		23	23
Canned:			
Fish.....	165	9,301	9,466
Fruit.....	277	15,110	15,387
Meat.....	92	492	584
Milk.....	25	15	40
Soup.....	969	16	985
Vegetables.....	269	3,431	3,700
Miscellaneous.....	2,186	4,291	6,477
Carbon black.....	12	103	115
Celite filterco..		586	586
Cement.....	449	8	457
Chalk.....	32		32
Charcoal.....	76		76
Chemicals.....	2,981	305	3,286
China and fire clay.....	89		89
Coal.....	1,800		1,800
Cocoa.....	60	10	70
Coconuts.....	40	552	592
Coffee.....	405	140	545
Coke.....	1,970		1,970
Cold storage:			
Beef.....	17		17
Butter.....	50		50
Eggs.....		110	110
Lard.....	50		50
Other.....	185		185
Confectionery.....	407		407
Copra.....		110	110
Cotton.....	421	1,043	1,464
Cottonseed meal.....		742	742
Cyanide.....	20		20
Drugs.....	1,506	6	1,512
Dyes.....	318		318
Earthenware.....	45	169	214
Eggs, dried.....		199	199
Fertilizer.....	33		33
Flour.....	300	4,268	4,568
Fruit:			
Dried.....	9	4,395	4,404
Fresh.....		796	796
Fullers earth.....	76	55	131
Furniture.....	520	111	631
General.....	42,119	16,525	58,644
Glass and glassware.....	2,596	201	2,797
Glue.....	63	13	76
Granite.....	25		25
Graphite.....	71		71
Gum.....		71	71
Hair.....		167	167

	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Hardwoods	693	782	1,475
Hay		1,169	1,169
Hemp		1,472	1,472
Honey	18	46	64
Hops		105	105
Ink	22		22
Jute	148		148
Lard substitute	1,795	14	1,809
Leather	69		69
Lime	29		29
Linoleum	299	57	266
Liquors	105	13	119
Lumber	6,699	155,867	162,476
Malt	295		295
Manufactured goods:			
Iron and steel	68,719	1,264	69,983
Machinery	2,228	763	2,991
Railroad material	85	71	156
Tinplate	8,259	1	8,260
Textiles	3,826	78	3,904
Miscellaneous	3,471	1,115	4,586
Matches	204	12	216
Metals:			
Copper	32	4,703	4,735
Iron	1,477	400	1,877
Lead	25		25
Scrap	279	706	985
Tin		5	5
Zinc	18	244	262
Other	87		87
Milk, powdered	18	204	222
Molasses	38		38
Musical instruments	12		12
Nitrates	271		271
Nuts		15	15
Oats	40		40
Oils:			
Coconut		12	12
Cottonseed	34		34
Crude	452		452
Gas oil, fuel oil	13	56,652	56,665
Gasoline, benzine, naphtha	29	332,958	332,987
Kerosene	17		17
Lubricating and greases	4,925	1,202	6,127
Vegetable	753	2	755
Wood	20		20
Other	261	60	321
Ores:			
Copper		300	300
Magnesite		109	109
Manganese	75	55	130
Zinc	14	950	964
Other	30	308	338
Paint	860	14	874
Paper	5,270	8,715	13,985
Paper pulp	32	7,352	7,384
Paper roofing	52		52
Peanuts	666	246	912
Peas	27	192	219
Phosphates	1,114	1,365	2,479
Porcelain	289		289
Rags	10	328	338
Rice	69	220	289
Rope	150	90	240
Rosin	647		647
Rubber:			
Manufactured	1,486	77	1,563
Scrap		59	59
Salt	324		324
Sand	2,200		2,200
Seeds:			
Hemp		30	30
Other		82	82
Shells	849		849
Silk		843	843
Skins and hides		1,710	1,710
Slag	1,791		1,791
Slate	221		221
Soap	2,268	95	2,363
Soda	116		116
Soda ash	1,712		1,712
Soda, bicarbonate	169		169
Soda, caustic	93		93
Sugar		20,363	20,363
Sulphur	12,590		12,590

	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Syrup.....	33		33
Talc.....		226	226
Tallow.....		170	170
Tar.....	136		136
Tobacco.....	1,814	50	1,864
Toys.....	55		55
Turpentine.....	93		93
Vegetables.....		756	756
Waste.....	45	33	78
Wax.....	55	24	79
Wheat.....		68	68
Wine.....		22	22
Wool.....	7	10,733	10,740
Total, July, 1930.....	207,096	683,667	890,763
Total, July, 1929.....	336,019	642,384	978,403
Total, July, 1928.....	245,433	633,488	878,921

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 19, 1930.

No. 736.

The following was received in a letter addressed to the Governor of The Panama Canal:

A new lighthouse has been established on La Plata Island in the same position as the old one but with an increased visibility. Characteristics of light are as follows:
Period, 7 seconds; flash 0.7 second, eclipse 6.3 seconds. Range, 16.6 miles; in clear weather, 30 miles.
Position, latitude 1° 15' 50" S., longitude 81° 06' 00" W.
Light is situated on N. W. end and summit of island.

(Signed.) C. E. ALFARO,
Ecuadoran Legation.

(NOTE.—Color of light was not given.)

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending August 16, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Santa Teresa.....	Grace Line.....	August 4.....	August 5.....	4	
Rangitane.....	New Zealand Shipping Co.....	August 5.....	August 6.....	17	
Barneveld.....	Royal Netherlands S. S. Co.....	August 5.....	August 6.....	115	
Vega.....	U. S. Government.....	August 7.....	August 7.....	47	
Virginia.....	Panama-Pacific Line.....	August 8.....	August 8.....		168
Saramacca.....	United Fruit Co.....	August 8.....	August 9.....	523	9
Salvador.....	Pacific Steam Navigation Co.....	August 9.....	August 9.....	2	
President Harrison.....	Dollar Line.....	August 10.....	August 10.....	13	3
Charles E. Harwood.....	Huasteca Petroleum Co.....	August 10.....	August 12.....	2,835	
Montebello.....	Union Oil Co.....	August 11.....	August 12.....	11,850	19
Santa Inez.....	Grace Line.....	August 12.....	August 12.....	8	1
Guatemala.....	Panama Mail S. S. Co.....	August 12.....	August 13.....	62	3
Archer.....	Roosevelt S. S. Co.....	August 12.....	August 13.....	284	
Lagarto.....	Pacific Steam Navigation Co.....	August 12.....	August 12.....		50
Colombia.....	Panama Mail S. S. Co.....	August 13.....	August 14.....	76	
San Mateo.....	United Fruit Co.....	August 14.....	August 15.....	141	61

Density of Water in Balboa and Cristobal Harbors.

Place.	Weight of sea water in ounces per cubic ft.			Rainy season. Average tempera- ture. Degrees F.
	Average.	Maximum.	Minimum.	
Cristobal (between docks 8 and 9).....	1018	1020	1013	84.0
Balboa (dock 18).....	1011	1021	1005	83.0

(NOTE—The above is based on two months observations at Cristobal, and Balboa. Average taken at 12-foot depth. Minimum occurred after heavy rain at 3-foot depth at Cristobal and 12-foot depth at Balboa. The weight of a cubic foot of fresh water at 85° F. is 995 ounces.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1930 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
<i>Cristobal</i>	August 19....	August 24....	August 27....	August 31....	September 3..	September 8.
<i>Ancon</i>	September 3..	September 8..	September 11.	September 15.	September 18.	September 23.
<i>Cristobal</i>	September 16.	September 21.	September 24.	September 28.	October 1....	October 6.
<i>Ancon</i>	September 30.	October 5....	October 8....	October 12....	October 15....	October 20.
<i>Cristobal</i>	October 15....	October 20....	October 23....	October 28....	October 31....	November 5.
<i>Ancon</i>	October 28....	November 2..	November 5..	November 9..	November 12.	November 17.
<i>Cristobal</i>	November 11.	November 16.	November 19.	November 23.	November 26.	December 1.
<i>Ancon</i>	November 25.	November 30.	December 3..	December 7..	December 10..	December 15.
<i>Cristobal</i>	December 9..	December 14..	December 17..	December 21..	December 24..	December 29.
<i>Ancon</i>	December 23..	December 28..	December 31..	January 4....	January 7....	January 12.

* Effective April 30, steamers sail daylight saving time.

* Due to discontinuance of the daylight saving time, departure after *S. S. Cristobal*, Sept. 16th, will be at 4 p. m., standard time.

Steamers sail at 4 p. m. from pier 65, North River, Foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

Hours of Departure of Passenger Trains.

Following are the hours of departure of the regular passenger trains of the Panama Railroad running between the Atlantic and the Pacific:

From Colon: Daily except Sunday, 7.00 a. m.,

12.15 p. m., 4.30 p. m.; Sunday only, 9.20 a. m. 4.00 p. m.

From Panama: Daily except Sunday, 7.05 a. m., 12.20 p. m., 4.35 p. m.; Sunday only, 7.05 a. m., 6.15 p. m.

The time required for passage from one terminal to the other is 1 hour and 45 minutes.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective August 20, 1930.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, Diesel, at Cristobal only, in bulk, no surcharge.....	Bbl. of 42 gals.	1.80
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.13
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Location of Patients and Visiting Hours, at Gorgas Hospital.

The following table shows the distribution of patients in the Gorgas hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Visiting Hours.
Section "A:"	
Ward 2, Semi-private, white male.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 3, American male, eye, ear, nose and throat patients.....	Tuesdays, Thursdays and Saturdays, 2.30 to 4.30 p. m. 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 4, Private rooms.....	Daily, same as Ward 2 (above).
Section "B:"	
Ward 5, Male, private rooms, American boys.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 6, Foreign, male and female, private rooms, American girls.....	
Ward 7, White females, private rooms.....	
Ward 8, Obstetrical department, white females.....	
Nursery.....	No visitors permitted in nursery.
Section "C:"	
Ward 9, Colored, male.....	Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 10, White foreign, male.....	
Ward 11, Colored, male (surgical).....	
Ward 12, Colored, male (medical).....	
Ward 13, Colored, male, G. U.....	
Ward 14, White, male, G. U.....	Tuesdays, Thursdays, Saturdays, Sundays, and holidays, 2.30 to 4.30 p. m.
Section "D:"	
Ward 15, American, male (surgical).....	Tuesdays, Thursdays, Saturdays, Sundays and holidays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.
Ward 16, American, male (medical).....	
Ward 17, Colored children.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3.00 p. m.
Ward 18, White children.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 19, Colored, female (medical).....	Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 20, Colored, female, surgical, obstetrical.....	
Isolation section.....	No visitors permitted except to visit tuberculosis patients Thursdays, Sundays and holidays, 1.30 to 3.00 p. m.

Permission to visit outside of visiting hours may be granted upon application to the Superintendent's Office. Immediate relatives of seriously ill patients will be admitted at any time by and in the discretion of the attending physician, section nurse, and in her absence, the nurse in charge.

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Certificate.—By direction of the Governor of the Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., August 27, 1930. No. 4.

CANAL WORK IN JULY, 1930.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of July, 1930.

BALBOA HEIGHTS, C. Z., August 21, 1930.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of July, 1930:

NUMBER OF TRANSITS.

During the month, 488 commercial vessels and 10 small nonseagoing launches measuring under 20 tons transited the Canal. In addition to these there were 33 vessels belonging to the United States Government, and 2 transits of Panamanian Government vessels, on which no tolls were collected, making a total of 533 transits for the month, or a daily average of 17.19.

Tolls on the 488 commercial vessels amounted to \$2,180,511.82, and on the launches to \$64.95, a total of \$2,180,576.77, or a daily average on all traffic of \$70,341.19.

Commercial traffic for the past month as compared with June, 1930, shows an increase of 10 transits and \$79,517.29 in tolls, and in comparison with the traffic in July, 1929, a decrease of 39 transits and \$79,070.55 in tolls. Traffic in the first 7 months of the current calendar year has fallen off to the extent of 284 transits and \$594,831.43 in tolls, in comparison with the corresponding period last year.

The total numbers of craft of all kinds transiting the Canal during the month of July, 1930, as compared with the same month in 1929 and 1928, are shown in the following tabulation:

	July, 1930.	July, 1929.	July, 1928.
Commercial vessels	488	527	509
Launches (under 20 tons).....	10	4	10
Noncommercial vessels:			
United States Government.....	33	44	28
Panamanian Government.....	2	2	3
For repairs.....		10	8
Total.....	533	587	558

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North- bound.	South- bound.	Total.
Gatun	8	8	16
Pedro Miguel.....	23	27	50
Miraflores.....	27	30	57
Total.....	58	65	123

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the calendar year 1930 to the end of July, 1930, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929.	1930.	1929.	1930.	1929.	1930.	1929.	1930.
January...	603	531	2,771,280	2,601,628	2,858,835	2,611,632	\$2,502,815.12	\$2,360,211.24
February...	522	491	2,428,530	2,369,255	2,550,496	2,377,900	2,211,961.20	2,131,386.12
March.....	536	515	2,567,961	2,505,859	2,743,768	2,558,238	2,343,865.55	2,260,002.36
April.....	540	489	2,488,176	2,479,096	2,719,668	2,456,782	2,281,087.27	2,232,763.00
May.....	524	479	2,496,905	2,418,633	2,536,839	2,261,616	2,296,546.57	2,162,898.60
June.....	503	478	2,352,431	2,358,237	2,424,002	2,147,181	2,127,805.97	2,100,994.53
July.....	527	488	2,468,280	2,438,895	2,598,162	2,402,047	2,259,582.37	2,180,511.82
Total...	3,755	3,471	17,573,563	17,171,603	18,431,772	16,815,396	16,023,664.05	15,428,767.87

* Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these Governments and vessels transiting solely for repairs, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for July, 1930, as compared with the corresponding month in 1929 and 1928, and the monthly averages for the fiscal year 1930:

	July, 1930.	July, 1929.	July, 1928.	Average per month for fiscal year 1930.
Number of vessels.....	488	527	509	515
Panama Canal net tonnage.....	2,438,895	2,468,280	2,318,395	2,498,385
United States net tonnage.....	1,827,188	1,907,298	1,771,887	1,890,255
Registered gross tonnage.....	3,030,107	3,118,081	2,922,904	3,119,221
Registered net tonnage.....	1,842,382	1,909,588	1,781,824	1,899,802
Tolls.....	\$2,180,511.82	\$2,259,582.37	\$2,109,083.19	\$2,256,407.50
Tons of cargo carried.....	2,402,047	2,598,162	2,291,955	2,502,619

The average daily number of transits, tonnage, tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for fiscal year 1930.
	July, 1930.	July, 1929.	July, 1928.	
Number of transits.....	15.74	17.00	16.41	16.95
Panama Canal net tonnage.....	78,674	79,622	74,787	82,139
Tolls.....	\$70,339.09	\$72,889.75	\$68,034.94	\$74,133.26
Tons of cargo carried.....	77,485	83,812	73,934	82,275

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of July, 1930, as compared with July, 1929 and 1928, are shown in the following tabulation:

	Average per vessel.		
	July, 1930.	July, 1929.	July, 1928.
Panama Canal net tonnage.....	4,998	4,684	4,554
United States net tonnage.....	3,744	3,619	3,481
Registered gross tonnage.....	6,209	5,917	5,742
Registered net tonnage.....	3,775	3,624	3,497
Tolls.....	\$4,468.26	\$4,287.63	\$4,143.58
Tons of cargo (including vessels in ballast).....	4,922	4,930	4,503
Tons of cargo (laden vessels only).....	5,802	5,878	5,431

NATIONALITY OF VESSELS.

Seventeen nationalities were represented in the commercial traffic passing through the Canal in July, 1930. Vessels of United States registry, with 240, led in the number of transits, while those of British registry, with 117, were second; vessels of these two nationalities made 73.2 per cent of the total transits for the month. Germany, Norway, and Japan were next with 30, 28, and 16 transits, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo carried through the Canal during the month of July, 1930, was 2,402,047 tons. Cargo from the Atlantic to the Pacific aggregated 575,964 tons, as compared with 699,652 tons in June, 1930, and 909,976 tons in July, 1929. From the Pacific to Atlantic there were 1,826,083 tons, as compared with 1,447,529 tons in June, 1930, and 1,688,186 tons in July, 1929.

From the Atlantic to Pacific, there was a decrease of 334,012 tons of cargo, or 36.7 per cent, as compared with July, 1929, caused by a decline in tonnages of practically all commodities, principally manufactured iron and steel. Various manufactured goods, totaling 156,451 tons, constituted the heaviest item of traffic in this direction, followed by mineral oils with 37,323 tons, phosphates with 23,771 tons, scrap metal with 20,029 tons, and paper with 17,483 tons.

From the Pacific to Atlantic, mineral oil shipments totaling 689,753 tons, were the heaviest item, followed by lumber with 279,522 tons, ores (principally iron) with 220,492 tons, wheat with 134,285 tons, and sugar with 111,628 tons.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.923 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.719 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of July, 1930, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$10,802.50	\$11,005.00	\$202.50	
British.....	548,746.40	597,750.20	49,003.80	
Chilean.....	8,623.75	9,377.00	753.25	
Colombian.....	901.85	783.00		118.85
Danish.....	32,769.48	33,915.40	1,145.92	
Danzig.....	17,415.19	15,666.20		1,748.99
Dutch.....	19,666.99	21,519.20	1,852.21	
French.....	50,025.95	52,386.60	2,360.65	
German.....	91,843.88	107,084.40	15,240.52	
Greek.....	3,295.00	4,099.00	804.00	
Italian.....	27,891.65	33,345.00	5,453.35	
Japanese.....	85,326.25	80,830.00		4,496.25
Norwegian.....	106,065.62	117,968.60	11,962.98	
Panamanian.....	12,166.05	13,492.20	1,326.15	
Swedish.....	29,298.37	30,990.60	1,692.23	
United States.....	1,131,644.14	1,166,424.00	34,779.86	
Yugoslav.....	4,088.75	4,570.00	481.25	
Total.....	2,180,511.82	2,301,205.80	127,058.07	6,364.09
Net increase for all traffic.....			120,693.98	

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$24,227.67
United States foreign trade.....	9,197.44
United States—Canal Zone trade.....	1,354.75
Net increase.....	34,779.86

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement of vessels transiting the Panama Canal in July, 1930, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....		1.59	1.59
British.....	.70	1.27	1.04
Chilean.....	.50	.70	.60
Colombian.....	1.51	1.43	1.48
Danish.....	1.11	1.17	1.15
Danzig.....		1.95	1.95
Dutch.....	.78	1.42	1.09
French.....	.49	1.28	1.01
German.....	.73	1.25	1.00
Greek.....		1.73	1.73
Italian.....	.41	.45	.44
Japanese.....	1.21	1.40	1.31
Norwegian.....	.88	1.62	1.36
Panamanian.....	.64	1.14	1.14
Swedish.....	.83	2.87	2.48
United States.....	.63	1.46	1.16
Yugoslav.....		1.78	1.78
Averages, July, 1930.....	.72	1.40	1.15
Averages, July, 1929.....	.98	1.45	1.25
Averages, July, 1928.....	.82	1.49	1.18

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of July is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....				69	375,067	\$385,446.00
Ballast.....	51	281,690	\$202,949.10			
General cargo ships:						
Laden.....	163	796,468	707,763.25	182	922,937	839,645.85
Ballast.....	14	51,713	36,682.80	5	10,933	7,961.43
Noncargo-carrying ships:						
Yachts.....	2	45	33.15	2	42	30.24
Total.....	230	1,129,916	947,428.30	258	1,308,979	1,233,083.52
Method of propulsion:						
Steam.....	161	799,357	693,689.72	190	936,008	899,405.28
Motor.....	65	330,129	253,327.08	66	372,607	333,405.90
Motor schooner.....	2	218	252.50	2	364	272.34
Nonpropelled.....	2	212	159.00			
Total.....	230	1,129,916	947,428.30	258	1,308,979	1,233,083.52

Of the 351 steam-driven vessels, 273 were oil burning, 77 coal burning, and 1 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of July, 1930. If the tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated.

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Battleships.....	1	² 32,000	\$16,000.00			
Cruisers.....	1	² 3,200	1,600.00	1	² 3,200	\$1,600.00
Cutters.....	1	² 10	500			
Gunboats.....	2	² 3,150	1,575.00			
Minesweepers.....	1	² 950	475.00			
Motor sailors.....	1	² 10	5.00			
Submarines.....	9	² 7,774	3,887.00	9	² 7,774	3,887.00
Supply ships.....	1	³ 1,613	2,016.25			
U. S. Army vessels:						
Transports.....	2	³ 7,816	9,770.00	4	³ 14,770	18,462.50
Total, U. S. Government.....	19		35,333.25	14		23,949.50
Panamanian Government vessels:						
Transports.....	1	² 101	72.72			
Yachts.....				1	² 20	10.00
Grand total.....	20		35,405.97	15		23,959.50

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of July, 1930, carried cargo as follows: Atlantic to Pacific, 1,423 tons; Pacific to Atlantic, 737 tons; total 2,160 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of July, 1930. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	8	56	\$50.10
Pacific to Atlantic.....	2	18	14.85
Total.....	10	74	64.95

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of July, 1930, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	62,928	36,698	99,626
Local cargo shipped..... tons..	6,210	744	6,954
Transit cargo arriving..... tons..	2,357,017	2,351,400	4,708,417
Transit cargo clearing..... tons..	2,344,258	2,375,088	4,719,346
Cargo received for transshipment..... tons..	27,244	1,816	29,060
Cargo transshipped..... tons..	26,531	1,506	28,037
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	99	29	128
Number of withdrawals.....	669	252	921
Tons received.....	2,273	254	2,527
Tons withdrawn.....	2,427	256	2,713
Packages received.....	5,070	2,664	7,734
Packages withdrawn.....	8,824	2,061	10,885
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	32	2	34
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons..	9,629	3	9,632
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	72	4	76
U. S. Army, including vessels..... tons..	19	2	21
Individuals and companies..... tons..	252		252
Panama Railroad Company..... tons..	7		7
Transferred to Navy..... tons..	9		9
Total sales and issues..... tons..	9,988	9	9,997

	Cristobal.	Balboa.	Total.
Coal on hand, July 1, 1930..... tons..	114,521	550	115,071
Coal on hand, August 1, 1930..... tons..	104,533	541	105,074
Coal received from Navy..... tons..		9	9
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls..	6,154.80	13,511.23	19,666.03
Panama Railroad Company..... bbls..	150.00	85.84	235.84
U. S. Army and Navy..... bbls..		108.10	108.10
Individuals and companies..... bbls..		138.76	138.76
Total sales and issues..... bbls..	6,304.80	13,843.93	20,148.73
Fuel oil received during July, 1930..... bbls..		79,438.64	79,438.64
Fuel oil on hand, August 1, 1930..... bbls..	* 73,639.90	105,618.07	* 179,257.97
Diesel oil sold during July, 1930..... bbls..	11,935.62	564.22	12,499.84
Diesel oil on hand, August 1, 1930..... bbls..	* 1,082.50	18,136.89	* 19,219.39
Miscellaneous transfers..... bbls..	13,296.65	822.85	14,119.50
Gasoline and kerosene pumped for The Panama Canal..... bbls..	2,523.24	4,843.64	7,366.88
Gasoline pumped for individuals and companies..... bbls..	940.40	7,121.20	8,061.60
Oil pumped for individuals and companies..... bbls..	516,474.78	301,066.50	817,541.28
Oil pumped for U. S. Navy..... bbls..	29,601.00	3,297.00	32,898.00
Total fuel oil, gasoline, and kerosene handled..... bbls..	581,076.49	331,559.34	912,635.83
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	19	3	22
Measured for Panama Canal net tonnage.....	5	1	6
Remeasured for Panama Canal net tonnage.....	16	2	18
Panama Canal net tonnage corrected.....	2	3	5
U. S. equivalent tonnage corrected.....	8	11	19
Services of harbor equipment:			
Tugs, total operating hours.....	331½	239½	570½
Launches, total operating hours.....	1,309	1,567½	2,876½
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$11,375.00	\$8,823.75	\$20,198.75
Pilotage.....	17,618.00	8,140.00	25,758.00
Seamen.....	10,536.00	12,272.00	22,808.00
Launch service.....	2,137.50	2,852.00	4,989.50
Wharfage.....	16,178.19	5,679.71	21,857.90
Ships measured.....	185.00	15.00	200.00
Miscellaneous.....	399.33	357.50	756.83
Ships repaired at Panama Canal shops:			
Commercial.....	41	12	53
U. S. Army and Navy.....	3	2	5
Panama Canal equipment.....	3	12	15
Total.....	47	26	73
Vessels dry docked:			
Commercial.....	7	1	8
U. S. Army and Navy.....	1	1	2
Panama Canal equipment.....	1	8	9
Total.....	9	10	19
Clearances issued.....	316	237	553
Bills of health issued.....	347	240	587

* Shortage of 409.40 barrels on account of shrinkage and seepage. * Shortage of 111.35 barrels on account of inventory.

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal...	549	3,431,761	2,100,833	506	3,127,353	1,928,765
Vessels entering port but not transiting Canal.	74	349,517	208,712	10	63,883	40,099
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	118	718,287	431,519	96	559,436	333,932
<i>Ships clearing.</i>						
All vessels, including those transiting Canal...	556	3,402,591	2,084,459	516	3,164,128	1,957,587
Vessels clearing port but not transiting Canal.	74	355,640	211,240	11	64,919	40,681
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	117	709,129	426,634	96	570,933	340,967

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports	1,462	681	2,143	106	353	459
From Pacific ports	180	135	315	269	248	517
Total disembarking	1,642	816	2,458	375	601	976
Embarking:						
For Atlantic ports	1,354	708	2,062	127	296	423
For Pacific ports	209	76	285	359	283	642
Total embarking	1,563	784	2,347	486	579	1,065
Remaining on board:						
From Atlantic to Pacific ports	1,858	2,088	3,946	2,089	1,930	4,019
From Pacific to Atlantic ports	1,668	1,646	3,314	1,621	1,932	3,553
From Atlantic to Atlantic ports	769	165	934			
From Pacific to Pacific ports				33	471	504
Total remaining on board	4,295	3,899	8,194	3,743	4,333	8,076
Total arriving	5,937	4,715	10,652	4,118	4,934	9,052
Total departing	5,858	4,683	10,541	4,229	4,912	9,141

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific	230	44	19.13
Pacific to Atlantic	258	50	19.38
Total	488	94	19.26

In addition to the aforesaid, 65 passenger-carrying vessels called at the port of Cristobal and 4 at Balboa without transiting the Canal, making a total of 163 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of July, 1930, 43 commercial airplanes entered and 42 cleared at the port of Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of July, 1930:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels	\$1,911.43	\$11,116.20	\$23,979.46	\$84.55	\$7,108.28	\$44,199.92
Government vessels	151.00	808.59	7,567.06	448.50	705.63	9,680.83
P. R. R. vessels	3.60	209.88	966.98	813.24	17.42	2,011.12
Total sales, July, 1930	2,066.03	12,134.67	32,513.50	1,346.29	7,831.38	55,891.87
Total sales, July, 1929	3,681.18	17,267.26	59,880.22	932.76	11,356.04	93,117.46
Total sales, July, 1928	3,242.14	14,054.59	46,338.19	933.54	9,124.77	73,693.23
Sales at Balboa to:						
Commercial vessels	677.31	1,637.57	12,439.45	404.93	11,163.58	26,322.84
Government vessels	356.55	895.67	11,118.96	81.05	420.80	12,873.03
P. R. R. vessels				38.90		38.90
Total sales, July, 1930	1,033.86	2,533.24	23,558.41	524.88	11,584.38	39,234.77
Total sales, July, 1929	1,617.35	18,961.10	35,631.97	1,640.86	8,149.92	66,001.20
Total sales, July, 1928	1,913.94	16,109.71	36,909.88	1,548.79	5,976.38	62,458.70

The aggregate sales to Government vessels during the month was \$22,553.86; to Panama Railroad vessels, \$2,050.02; and to other commercial vessels, \$70,522.76, making the total sales to all vessels \$95,126.64. The figures shown are subject to minor changes on final audit.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of July, 1930, as compared with the corresponding month in 1929 and 1928:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. †			July, 1930.	July, 1929.	July, 1928.
	North.	South.	Total.	North.	South.	Total.			
Gatun	249	216	465	6	9	15	480	511	501
Pedro Miguel	252	217	469	13	21	34	503	542	520
Miraflores	251	216	467	13	21	34	501	534	518
	Number of vessels put through locks.								
Gatun	257	230	487	36	36	72	559	595	578
Pedro Miguel	256	225	481	44	51	95	576	629	623
Miraflores	256	225	481	48	54	102	583	636	622

† Includes tolls-paying launches under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels	33	33	33
Panama Canal equipment	16	50	57
Launches (under 20 tons)	17	9	9
Panamanian Government vessels	1	3	3

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in July, 1930, as compared with the preceding month and the corresponding month in 1929:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages	1,904,970,000	1,531,600,000	1,486,700,000
Leakage	40,000,000	12,500,000	20,000,000
Maintenance	3,380,000		
Total, July 1930	1,948,350,000	1,544,100,000	1,506,700,000
Total, June, 1930	1,982,360,000	1,567,860,000	1,552,580,000
Total, July, 1929	2,086,630,000	1,608,210,000	1,604,570,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of July, 1930, are shown in comparative form, in the following tabulations:

	July.		July—Years of record.		
	1929.	1930.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Discharge of Chagres River at Alhajuela	1,926	2,285	6,197	1,248	2,786
Maximum momentary discharge for the month	10,778	17,790	33,700		
Gatun Lake watershed, total yield	4,882	5,107	14,663	2,677	6,945
Gatun Lake watershed, net yield	4,396	4,482	14,156	1,898	6,395
Draft on Gatun Lake for lockages and power	2,955	2,810	2,955	1,244	2,288

‡ July 22, 1927.

‡ July, 1914, not included.

‡ No water saving.

The discharge of the Chagres River at Alhajuela was 18 per cent below the 29-year average, or 2,285 c. f. s., compared with an average of 2,786 c. f. s. The maximum momentary discharge for the month was 17,790 c. f. s. at elevation 100.04 feet on the

8th. The minimum discharge was 1,025 c. f. s. at elevation 92.25 feet on the 3d. The maximum mean monthly discharge on record for the month of July is 6,197 c. f. s. in 1927, and the minimum 1,248 c. f. s. in 1905. The maximum momentary discharge on record for July is 33,700 c. f. s. at elevation 103.99 feet on July 22, 1927.

The total yield of the Gatun Lake watershed for July was 5,107 c. f. s., or 26 per cent below the 17-year average for July of 6,945 c. f. s. Maximum and minimum total yields of record for July are 14,663 c. f. s. in 1927, and 2,677 c. f. s. in 1914. The lake varied in elevation from 83.16 feet on the 7th to a maximum of 84.47 feet on the 27th, and ended at elevation 84.29 feet, showing a net rise during the month of 0.92 foot.

Miraflores Lake varied between elevations 53.40 feet on the 25th and 54.76 feet on the 10th, averaged 53.81 feet, and ended at elevation 54.06 feet.

SEISMOLOGY.

Six seismic disturbances were recorded during the month, on the 7th, 14th, 15th, 27th, 29th, and 30th. The disturbance on the 30th was of intensity V-VI on the Rossi-Forel scale. No damage was done to Canal structures.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,262,900 kilowatt hours, and the computed water consumption was 4,087,153,990 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 5,300 kilowatt hours, and the fuel oil consumption was 25.7 barrels. The station was operated only for peak-load service during the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 47 vessels during the month. There were 421 work orders issued during the month, as compared with 474 issued during the previous month.

MECHANICAL DIVISION.

During the month of July, 1930, miscellaneous repairs were made on 47 vessels at Cristobal and 26 at Balboa. Nine vessels were dry docked at Cristobal and 10 at Balboa. Work was completed and carried forward on several pieces of equipment of The Panama Canal, the United States Army and Navy, and commercial steamship lines.

MUNICIPAL ENGINEERING DIVISION.

One hundred and twenty-three square yards of concrete pavement was laid at the Chilibrillo river, on the Madden road. The bridges over the Chilibre and Chilibrillo rivers were completed except for the road slab. The Azote Caballo road was completed.

On the Thatcher Highway the erection of Camp No. 1 was 90 per cent completed. One and one-quarter miles of temporary road was built and a temporary ferry put in operation.

Work on several improvement projects in the cities of Colon and Panama, and in the Canal Zone, was carried on.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 740,394,000 gallons.

DREDGING DIVISION.

The East Las Cascadas slide showed a slight movement along the waterfront and the Southwest La Pita slide a slight surface movement during the month. A break occurred on the 26th between stations 1735-00 and 1738-00 W. on the West Lirio slide, extending back 200 feet from the new west prism line and about 60 feet above the lake level. There was a depth of 20 feet on the west prism line and a depth of 39 feet, 50 feet east at station 1738-00. A settlement of this slide at the water's edge also took place between stations 1772-00 and 1724-50 W. The general movement of the West Culebra slide along the waterfront continued throughout the month with an average movement of 1.1 feet toward the Canal between stations 1772-00 and 1794-00 W. with a maximum of 2.0 feet at station 1792-00. A movement of the East Barge Repair slide took place on the 10th, when 20 feet of the Lirio run-off culvert head wall and apron broke down and 25,000 cubic yards of material entered the Canal. This material pushed out over the east prism line for 65 feet, leaving a depth of water of 33 feet at station 1748-00, 85 feet east of the center line. A few bank breaks

occurred during the month. There was no interference with shipping on account of slides.

The total excavation during July, 1930, was 655,315 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
	Cubic yds.	Cubic yds.	Cubic yds.
Work excavation:			
Gaillard Cut—			
East Barge repair slide.....	12,150	14,800	26,950
Project No. 3.....	7,450	19,750	27,200
West Lirio slide.....	12,700	38,150	50,850
Maintenance.....	2,750	4,150	6,900
Pacific Entrance—			
Project No. 1.....	59,000	196,600	255,600
Maintenance.....	163,000	20,000	183,000
Auxiliary.....	600	1,200	1,800
Plant excavation:			
Dredging sand at Chame.....	3,515		3,515
France Field.....	99,500		99,500
Total.....	380,665	294,650	655,315

The ferry crossing at the north end of Pedro Miguel lock operated 31 days during the month. One thousand three hundred and sixty-four trips were made, and 144 Panama Canal, 26 U. S. Army, and 4,470 other vehicles, a total of 4,640, were ferried across the Canal.

MADDEN DAM PROJECT.

Preliminary layouts of hydroelectric works were drawn showing the power house on the right bank of the river and the spillway over the main dam, with intakes upstream from spillway and also in spillway section. The installation of low-head units to utilize storage at the lower elevations of reservoir level was studied. Comparative studies were made of long-span and short-span transmission lines, and design of towers for long-span line started. Layout of general wiring diagram for the power development was drawn. Natural storage between Alhajuella and Gamboa for the 1,000-year flood was calculated.

The precise level circuit, from the precise bench mark datum along the Canal, has been carried up the Madden road to the Azote Caballo Ridge road, and will be extended to the damsite and along the Madronal and Azote Caballo ridges.

Sufficient mapping has been done to form a basis for an estimate of the amount of earth dam material available on the Azote Caballo side of the reservoir. At typical and centrally-located points four test pits and one sampling trench were staked out, and at two of these points work is in progress.

Requisition was issued to cover simple and three dimensional tests of additional specimens of rock from strata "b" and "c" at the damsite, and 21 specimens from the left bank were shipped to the United States on the 27th. At the end of the month 24 specimens from the right bank were nearly ready for shipment. Tests for moisture content, and simple compression tests of cores from the same drill holes are being made at Miraflores Laboratory.

No sink-hole excavation was done during the month. Cleaning out and timbering was done at No. 1 for a length of 300 feet, at No. 5 for 9 feet, and at No. 13 for 5 feet. At No. 20 the shaft was timbered, drain for surface water constructed, and concrete base for hoist was built. Blowers and pipe lines have been installed and are now operating at sink holes Nos. 1 and 5.

One thousand two hundred and forty-three feet of drilling of all types was performed during the month.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children occupying Panama Canal quarters on July 31, 1930, was 22,640, composed of 7,818 Americans, 2,829 of whom were men, 2,319 women, and 2,670 children; 245 Europeans, 92 of whom were men, 38 women, and 115 children; 14,577 West Indians, 4,219 of whom were men, 2,686 women, and 7,672 children. The total number of persons in quarters on July 31, 1929, was 21,906.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of July 16, 1930, with a comparison of the working force for the preceding month and for July 1929:

	As of July 16, 1930.			Total employees.	
	Gold.	Silver.	Total.	June, 1930.	July, 1929.
Operation and Maintenance:					
Office.....	58	71	129	140	105
Electrical.....	158	173	331	335	327
Municipal Engineering.....	99	972	1,071	762	1,599
Lock Operation.....	239	713	952	941	956
Dredging.....	202	1,009	1,211	1,179	1,251
Madden Project.....	30	266	296	669	.....
Mechanical.....	503	877	1,380	1,388	1,401
Marine.....	201	587	788	799	856
Fortifications.....	26	151	177	165	317
Total.....	1,516	4,819	6,335	6,378	6,812
Supply Department:					
Quartermaster.....	223	1,988	2,211	2,203	2,131
Commissary.....	234	1,326	1,560	1,552	1,503
Cattle Industry—Plantations.....	2	94	96	100	188
Hotel Tivoli.....	8	107	115	116	109
Hotel Washington.....	9	95	104	104	109
Transportation.....	76	252	328	325	287
Total.....	552	3,862	4,414	4,400	4,327
Accounting Department.....	203	6	209	210	216
Health Department.....	292	860	1,152	1,155	1,147
Executive Department.....	528	330	858	865	844
Total.....	1,023	1,196	2,219	2,230	2,207
Panama Railroad Company:					
Superintendent.....	52	250	302	302	326
Transportation.....	63	123	186	188	190
Receiving and Forwarding Agency.....	90	1,017	1,107	1,377	1,494
Coaling Stations.....	43	183	226	249	278
Total.....	248	1,573	1,821	2,116	2,288
Grand total, July, 1930.....	3,339	11,450	14,789	.....	.....
Grand total, June, 1930.....	.....	.....	.....	15,124	.....
Grand total, July, 1929.....	.....	.....	.....	.....	15,634

Additions to the gold force on the Isthmus in July were as follows: Employed in the United States, 9; reemployed in the United States, 1; employed on the Isthmus, 17; reemployed on the Isthmus, 15; total, 42. Separations from the gold force totaled 30, as follows: Resigned, 18; discharged, 8; retired, 3; died, 1. At the end of the month there were on file 520 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 201 deaths occurred during the month of July, 1930, among the population of the Canal Zone, and the cities of Panama and Colon, which is equivalent to an annual death rate of 16.79 per 1,000 population. The leading causes of death were: Pneumonia (broncho and lobar), 28; tuberculosis (various organs), 22; nephritis (acute and chronic), 17; and diarrhea and enteritis, 13. There were 10 deaths from cancer, 10 from organic diseases of the heart, 9 from syphilis, and 1 each from leprosy, meningococcus meningitis, and chicken pox. There were 21 deaths among nonresidents. These are not included in the above statistics.

There were 320 live births and 12 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 27.74. Deaths among children under 1 year of age numbered 44, giving an infant mortality rate based on the number of live births reported, of 137.50.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during July was 464, of whom 82 were employees (13 white and 69 colored), 72 were members of employees' families (6 white and 66 colored), 19 were Canal Zone agriculturists, 152 were other civilian nonemployees, and 139 were Army and Navy personnel. Of the 154 employees and members of employees' families, 54 were probably infected outside our sanitized areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There were three deaths from malaria among residents, 1 a Canal Zone agriculturist, 1 colored adult living in Panama City, and 1 a 27-day-old baby who evidently contracted the disease at the place of its birth in Panama City.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$430,542.13, of which \$411,988.15 was for the Department of Operation and Maintenance, and \$18,553.98 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material amounted to \$56,111.16.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of June, 1930, as compared with June, 1929, with the figures for the fiscal year ended June 30, 1930, as compared with the fiscal year 1929.

It is impossible to submit figures for the month of July at the time of writing this report, since all charges, etc., involved in the accounting have not been completed.

	June, 1930.	June, 1929.	Fiscal year.	
			1930.	1929.
Tolls.....	\$2,101,108.17	\$2,127,851.84	\$27,077,117.36	\$27,123,534.33
Other receipts.....	360,104.72	389,293.72	4,500,655.50	4,055,424.47
Total transit revenues.....	2,461,212.92	2,517,145.56	31,577,772.86	31,178,958.80
Total transit expenses.....	1,196,164.21	1,235,305.43	13,495,321.08	13,449,183.79
Net transit revenues.....	1,265,048.71	1,281,840.13	18,082,451.78	17,729,775.01
Three per cent capital charge...	621,273.45	619,006.34	7,456,319.89	7,392,091.89
Transit surplus.....	643,775.26	662,833.79	10,626,131.89	10,337,683.12
Business revenues.....	1,635,358.99	1,395,771.67	19,865,895.45	17,236,785.02
Business expenses.....	1,573,010.67	1,637,249.01	19,104,923.79	16,498,934.76
Net revenues.....	62,348.32	(241,477.34)	760,971.66	737,850.26
Three per cent capital charge.....	64,447.23	62,674.50	808,861.93	788,424.05
Business deficit.....	(2,098.91)	(304,151.84)	(47,890.27)	(50,573.79)
Combined revenues.....	4,096,571.91	3,912,917.23	51,443,668.31	48,415,743.82
Combined expenses.....	2,769,174.88	2,872,554.44	32,600,244.87	29,948,118.55
Net revenues.....	1,327,397.03	1,040,362.79	18,843,423.44	18,467,625.27
Three per cent capital charge.....	685,720.68	681,680.84	8,265,181.82	8,180,515.94
Combined surplus.....	641,676.35	358,681.95	10,578,241.62	10,287,109.33

Respectfully,

H. BURGESS,
Governor.

Embarking or Disembarking Passengers.

THE PANAMA CANAL, DEPARTMENT OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS C. Z., August 22, 1930.

Notice to steamship agents:

Among vessels transiting the Panama Canal, there are some which stop at only one terminal to discharge and receive passengers, and a few that stop at neither terminal. In consequence, on numerous occasions in the past this office has received requests from the agents of vessels concerned (or direct requests from the prospective passengers or friends of actual passengers) for permission to embark or disembark passengers while the vessel, in transit, is at one of the locks.

This procedure is strictly prohibited by Executive Order (See Rule 40, "Rules and Regulations Governing Navigation of the Panama Canal"). Agents of vessels, therefore, will please see that, in the future, all passengers or prospective passengers are notified accordingly, and make such arrangements as may be necessary and safe for embarking or disembarking such passengers in the terminal basins, either prior or subsequent (as the case may be) to the vessel's transiting the locks.

C. H. WOODWARD,
Marine Superintendent.

Approved:

H. BURGESS,
Governor.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 22, 1930.

No. 737.

AID TO NAVIGATION.

Panama Canal, Atlantic entrance, west breakwater entrance. The following information is furnished by the Lighthouse Subdivision:

The west breakwater beacon, on the west side of the entrance through the breakwater of Limon Bay, temporarily discontinued August 7, 1930, due to rebuilding operations (see Notice to Mariners, B. H. No. 731, August 8, 1930) was reestablished August 21, 1930.

Description. The new beacon is located on the same position occupied by the old one and consists of a 375 m.m. acetylene gas lantern mounted on a 24-foot steel tower; tower set on a 10-foot concrete pedestal. The tower and pedestal are painted white.

Characteristic. Red group flashing, period 2 seconds: 0.3 light, 0.4 eclipse, 0.3 light, 1.0 eclipse; *height*, 37.5 feet above mean high water; *visibility*, 10 nautical miles; *position*, lat. 9° 23' 23" N., long. 79° 55' 31" W.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 23, 1930.

No. 738.

The following is quoted from Notice to Mariners No. 33 of August 16, 1930, published by the Hydrographic Office, Navy Department, Washington, D. C.:

1. *Curacao Island, Canon Point light, characteristic changed.* Canon Point light has been changed from group flashing white to flashing white. Period 4 seconds; flash 0.3 second, eclipse 3.7 seconds. The light is visible 8 miles. Approximate position, 12° 03' N., 68° 45' W.

2. *Peru, Islay Point, light established.* The second officer of the American steamer *Nosa Chief* (Ex *Garfield*), reports under date of June 17, 1930, that a flashing white light has been established on Flat Rock Point, Islay Point, Peru. Approximate position, 17° 00' 04" S., 72° 07' 30" W.

J. L. SCHLEY,
Acting Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 25, 1930.

No. 739.

Panama, Canal Zone, Balboa harbor, lights on oil berth changed. The two green lights formerly marking Dock 2-C (Oil Crib) in Balboa harbor, have been removed and one red light has been installed in center of offshore edge of the structure.

J. L. SCHLEY,
Acting Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending August 23, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
San Mateo.....	United Fruit Co.....	August 16....	August 16....		68
Corinto.....	Panama Mail S. S. Co.....	August 16....	August 16....		1
S. A. Perkins.....	Jas. Griffiths & Sons.....	August 17....	August 22....	4,069	
Emma Maersk.....	Standard Oil Co.....	August 17....	August 18....	11,836	
Bokuyo Maru.....	Nippon Yusen Kaisha.....	August 17....	August 17....	151	5
Chateau Thierry.....	U. S. Government.....	August 18....	August 19....	29	10
Tatsuno Maru.....	Nippon Yusen Kaisha.....	August 18....	August 19....	219	
City of Panama.....	Panama Mail S. S. Co.....	August 18....	August 19....	67	
Nitro.....	U. S. Government.....	August 19....	August 19....	2	3
Santa Barbara.....	Grace Line.....	August 20....	August 20....	3	
Pennsylvania.....	Panama-Pacific Line.....	August 22....	August 22....		184
Suriname.....	United Fruit Co.....	August 22....	August 23....	554	36
Carl Legien.....	Hamburg-American Line.....	August 23....	August 23....	208	

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, August 23, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day	Hour	Day	Hour	Day	Hour	Day	Hour								Nature.	Tons.	Gross.	Net.
Ebro	16	16.00	17	6.08	17	13.26	17	14.40	British	Pacific Steam Nav. Co.	450.0	56.0	24.8	New York, N. Y.	Talcahuano, Chile.	General	2,981	6,301	
Pueblo	17	2.15	17	6.20	17	13.41	17	15.00	American	Richfield Oil Co.	340.0	49.2	17.0	New York, N. Y.	Los Angeles, Calif.	Ballast	4,613	2,996	
Dwight	17	4.15	17	7.20	17	14.33	17	15.40	American	Tide-water Oil Co.	435.0	56.0	16.6	New York, N. Y.	San Francisco, Cal.	Ballast	7,441	5,077	
Royal Prince	17	5.40	17	7.45	17	15.13	17	16.40	British	Prince Line, Ltd.	480.4	63.0	21.0	Boston, Mass.	Manila, P. I.	General	3,617	8,594	
Bruswick	17	9.08	17	9.30	17	16.35	17	19.14	Panamanian	Atlantic Refining Co.	471.0	68.0	20.0	Rotterdam, Holl'd.	Los Angeles, Calif.	Ballast	9,178	6,050	
Subotawan	17	9.50	17	10.05	17	17.31	17	22.00	American	Redwood Line	387.0	52.2	19.0	Houston, Texas	Seattle, Wash.	General	3,839	5,708	
Port Napier	17	10.05	17	10.45	17	17.51	18	2.10	British	Com'lth & Dom. Line.	490.2	61.0	25.0	New York, N. Y.	Fremantle, Aust'ln	General	2,571	10,978	
Gen. Wm. M. Graham	17	8.10	17	8.10	17	15.18	18	11.19	American	U. S. Army.	450.0	32.0	..	Cristobal, C. Z.	Balboa, C. Z.	Ballast	..	8,201	
Eagle	17	15.50	17	16.10	17	9.37	18	11.19	American	Standard Transp. Co.	410.0	56.0	21.0	New York, N. Y.	Los Angeles, Calif.	Ballast	..	6,226	
Ruapahu	17	14.00	18	6.10	18	14.03	18	15.30	British	N. Z. Shipping Co.	457.0	58.0	27.6	London, England.	Auckland, N. Z.	General	4,230	9,079	
Chateau Thierry	17	17.55	18	6.40	18	13.25	19	12.15	American	U. S. Army.	436.9	58.2	26.0	Brooklyn, N. Y.	Honolulu, T. H.	Army supplies	229	..	
Eider	17	22.50	18	7.25	18	14.27	19	16.30	American	Luckenbach Line.	425.0	57.3	23.0	New Orleans, La.	Seattle, Wash.	General	3,994	8,568	
Lindenbank	18	7.50	18	8.20	18	15.50	19	16.50	British	Amer-Oriental Line.	422.0	56.6	23.8	Baltimore, Md.	Nagoya, Japan.	General	5,086	7,249	
Matne	18	11.50	18	12.00	18	19.30	19	20.50	American	Isthmian S. Lines	402.0	54.0	25.0	Baltimore, Md.	Seattle, Wash.	Steel, general	6,621	6,936	
Nitro	17	8.40	19	3.55	19	13.45	20	5.30	American	U. S. Navy.	462.0	60.0	22.6	Hampton Rds., Va.	San Diego, Calif.	General	1,062	..	
Saugstad	18	21.50	19	7.30	19	14.40	19	16.00	Norwegian	Fern Line.	382.7	53.4	24.4	Houston, Texas	Saikobin, China.	Cotton, phosph'te.	7,200	16,100	
Amerikaland	18	22.20	19	7.30	19	15.24	19	19.30	Swedish	Ore S. Corp.	561.0	72.0	22.3	New York, N. Y.	Cruz Grande, Chile	Ballast	2,800	5,719	
San Gabriel	19	9.05	19	9.15	19	16.14	19	17.30	American	Pac-Atlantic S. Co.	331.0	52.3	17.3	Baltimore, Md.	Portland, Ore.	General	8,284	4,023	
Roseville	19	6.45	19	11.20	19	18.45	19	20.00	Norwegian	A. F. Klavness & Co.	426.4	58.5	25.0	Antwerp, Belgium	Seattle, Wash.	General	2,567	7,156	
Dakotan	19	10.45	19	12.05	19	19.10	19	20.34	American	Amer.-Hawaiian Line.	407.7	53.7	19.0	Boston, Mass.	Seattle, Wash.	General	2,567	7,156	
Sutherland	19	13.00	19	13.20	19	20.45	19	22.00	American	Nelson Line	380.0	53.2	22.0	New York, N. Y.	Seattle, Wash.	Iron, coal, gen.	4,983	6,654	
F. J. Luckenbach	20	00.45	20	8.30	20	15.13	20	16.15	American	Luckenbach Line.	446.0	56.1	24.0	Boston, Mass.	Tacoma, Wash.	General	3,173	8,508	
Ferrywood	20	00.35	20	10.00	20	17.32	21	3.12	Norwegian	Tredahl, Plant, Lafonte	450.0	55.0	20.11	New Orleans, La.	Sydney, Australia.	Asphalt, general	7,460	..	
San Julian	20	4.35	20	12.21	20	19.18	20	20.30	American	States S. Co.	468.0	58.5	18.7	Philadelphia, Pa.	Seattle, Wash.	General	2,755	8,460	
Agriworld	20	12.30	20	12.45	20	19.58	21	4.05	American	Richfield Oil Co.	439.0	59.2	18.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,720	5,615	
Santa Barbara	20	7.10	20	14.05	20	20.50	21	1.27	American	Grace Line.	466.0	64.0	23.0	New York, N. Y.	Valparaiso, Chile.	General	2,095	10,487	
Doreas	20	..	20	10.29	20	..	21	..	American	M. A. James.	..	..	..	Cristobal, C. Z.	Gatun, C. Z.	Towing barge	3	..
D. R. M. No. 3	20	..	20	10.29	20	..	21	..	American	M. A. James.	..	..	..	Cristobal, C. Z.	Gatun, C. Z.	Towing barge	3	..
El Cervo	21	5.15	21	6.20	21	14.15	21	15.30	British	Anglo-Ecuador Oil Co.	407.4	52.2	19.0	Philadelphia, Pa.	La Libertad, Ecua.	Ballast	6,046	4,326	
Mittlemeer	21	5.30	21	6.25	21	15.10	21	18.10	German	Anglo-Saxon Pet. Co.	412.0	55.0	23.0	Hamburg, Germany	Los Angeles, Calif.	Ballast	6,605	4,340	
Quebec City	21	7.45	21	8.00	21	15.58	21	19.00	British	Reardon Smith Line	400.5	54.3	23.6	Casa Bianca, Mor.	Yokohama, Japan.	Phosphates	7,700	7,004	
Calcut	18	16.50	21	10.40	21	17.44	21	21.00	German	Roland Line	216.5	32.9	14.8	Cristobal, C. Z.	Guyaquil, Ecuador	General	363	1,105	
Brandanger	21	10.20	21	10.40	21	17.10	21	18.10	Norwegian	Westfal, Larsen & Co.	381.0	53.6	12.6	South Brewer, Me.	Los Angeles, Calif.	Ballast	6,289	4,723	
Olma	21	11.35	21	11.45	21	18.14	21	22.31	British	Davis & Newman	430.0	57.0	19.6	Falmouth, England	Los Angeles, Calif.	Ballast	7,348	5,182	

7 Barge.

6 Launch.

5 Motor ship.

4 Ammunition ship.

3 Transport.

2 Mine planter.

1 Tanker.

Orbita	21	3	20	21	12	15	21	19	12	21	20	27	British	Pacific Steam Nav. Co.	550.0	67.0	28.0	Liverpool, England	Talcahuano, Chile	3,820	16,844	11,751
Balboa	21	17	25	22	6	05	22	13	51	22	17	50	Swedish	Johnson Line	426.0	56.0	24.0	Stockholm, Sweden	Tacoma, Wash.	7,094	7,480	5,533
Forbes	21	20	35	22	6	10	22	14	34	22	16	05	American	Manson-McCor'k Line	409.8	80.3	27.0	Philadelphia, Pa.	Tacoma, Wash.	4,299	6,831	4,969
Hauptman	22	5	55	22	7	15	22	15	20	23	1	05	American	Panama-Pacific Line	586.4	54.2	31.0	New York, N. Y.	San Francisco, Cal.	3,218	26,262	18,194
Pennsylvania	22	6	00	22	7	30	22	16	04	22	21	28	American	Dollar Line	600.0	65.0	29.0	New York, N. Y.	San Francisco, Cal.	4,204	17,081	11,314
President	22	8	10	22	8	10	22	17	24	22	18	34	Panamanian	United Fruit Co.	105.0	15.0	8.0	Perme, R. P.	Balboa, C. Z.	48	96	59
Amnetta I	22	23	00	22	8	10	22	17	24	22	18	34	American	Shepard S. S. Co.	410.0	54.2	21.6	Boston, Mass.	Seattle, Wash.	5,818	6,025	4,841
Sea Thrush	22	5	20	22	8	55	22	16	29	22	20	04	American	Sun Oil Co.	480.6	66.0	24.0	Chester, Pa.	Los Angeles, Calif.	9,607	3,256	6,551
Western Sun	22	16	50	22	10	05	22	18	03	22	19	21	American	N. O. & S. A. S. Co.	299.4	45.0	17.8	New Orleans, La.	Talcahuano, Chile	1,069	3,256	2,010
Nosa Chiel	21	16	25	22	11	00	22	18	18	22	23	34	Italian	Nav. Libera-Triestina	430.8	55.0	18.0	Trieste, Italy	Vancouver, B. C.	2,910	7,789	6,025
Kialto	21	10	25	22	14	00	22	11	35	22	23	12	Dutch	Holland-American Line	485.0	62.0	22.5	Rotterdam, Holland	Portland, Ore.	3,578	10,793	7,619
Drechttdijk	21	10	50	22	11	35	22	11	35	22	23	12	American	Holland-Banana Corp.	485.0	62.0	22.5	Cristobal, C. Z.	Gatun, C. Z.	12	12	12
Clemens	22	14	00	22	11	35	22	11	35	22	23	12	American	American Bananas Corp.	485.0	62.0	22.5	Cristobal, C. Z.	Gatun, C. Z.	17	17	17
No. 14, C. Z.	22	14	00	22	11	35	22	11	35	22	23	12	American	American Bananas Corp.	485.0	62.0	22.5	Cristobal, C. Z.	Gatun, C. Z.	17	17	17
4443	22	14	00	22	11	35	22	11	35	22	23	12	American	American Bananas Corp.	485.0	62.0	22.5	Cristobal, C. Z.	Gatun, C. Z.	17	17	17
No. 16, C. Z.	22	14	00	22	11	35	22	11	35	22	23	12	American	American Bananas Corp.	485.0	62.0	22.5	Cristobal, C. Z.	Gatun, C. Z.	17	17	17
4499	22	14	00	22	11	35	22	11	35	22	23	12	American	American Bananas Corp.	485.0	62.0	22.5	Cristobal, C. Z.	Gatun, C. Z.	17	17	17
No. 19, C. Z.	22	14	00	22	11	35	22	11	35	22	23	12	American	American Bananas Corp.	485.0	62.0	22.5	Cristobal, C. Z.	Gatun, C. Z.	17	17	17
4119	22	14	00	22	11	35	22	11	35	22	23	12	American	American Bananas Corp.	485.0	62.0	22.5	Cristobal, C. Z.	Gatun, C. Z.	17	17	17
Carl Legien	22	5	35	23	5	55	23	13	43	24	10	50	German	Hamburg-American Line	409.8	54.0	23.0	Boston, Germany	San Antonio, Chile	6,322	7,145	5,474
Pacific Spruce	23	00	05	23	7	05	23	14	39	23	15	22	American	Dimon S. S. Corp.	410.0	54.0	23.0	Philadelphia, Pa.	Seattle, Wash.	3,972	6,624	4,757
Champereau	7-31	16	05	23	9	40	23	16	26	23	18	10	British	Pacific Steam Nav. Co.	290.0	41.0	17.1	Boston, Mass.	Portland, Ore.	4,821	2,597	1,587
Kansan	23	10	15	23	10	35	23	17	09	24	18	10	American	Amer-Hawalland Line	404.0	53.9	18.6	Boston, Mass.	Portland, Ore.	3,236	6,779	4,921
Clto	23	13	25	23	18	30	23	20	50	24	3	10	Danzig	W. Tankerschiff Rhederei	470.0	63.0	19.0	Hamburg, Germany	Talara, Peru	9,248	6,310	6,310

* Tanker.

* Motor boat.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Birkenhead	16	22	00	17	6	04	17	14	00	17	14	00	American	Vacuum Oil Co.	425.0	57.2	27.0	Los Angeles, Calif.	Baltimore, Md.	9,310	7,502	5,042
Ferdale	17	5	30	17	6	43	17	14	30	17	18	55	British	White Star Line	500.0	63.2	23.0	Wellington, N. Z.	London, England	4,485	11,811	7,398
Caldas	16	22	50	17	7	25	17	15	25	18	23	00	Colombian	National Navigation Co.	116.0	21.1	9.0	Buenaventura, Col.	Cristobal, C. Z.	594	211	124
Saint Jean	17	8	20	17	9	06	17	16	10	17	22	05	French	French Line	397.0	50.1	24.0	Santa Rosa, Mex.	Le Havre, France	4,327	5,849	4,103
Wind Rush	17	9	40	17	10	34	17	17	55	17	17	55	American	Shepard S. S. Co.	410.0	54.2	24.0	Tacoma, Wash.	Boston, Mass.	7,700	6,558	4,761
Sinaloa	17	10	07	17	10	53	17	18	20	17	22	00	British	Chan Line Steamships	258.6	36.5	14.0	N. Westminster, B. C.	St. Pierre, France	900	1,568	829
Tamara	17	10	45	18	6	20	18	13	45	18	13	45	British	Shaw, Savill & Albion	500.4	63.2	23.0	Wellington, N. Z.	London, England	4,217	13,592	9,383
Lobos	17	16	00	18	6	40	18	15	05	18	17	20	British	Pacific Steam Nav. Co.	404.7	52.4	27.0	Corral, Chile	Hull, England	8,355	7,151	4,756
Lemo	17	20	30	18	7	12	18	16	15	18	21	00	Italian	Nav. Libera-Triestina	420.0	57.0	27.3	Vancouver, B. C.	Genoa, Italy	8,888	8,305	6,497
Castlemoor	17	20	40	18	8	13	18	16	10	18	17	25	British	Ore S. S. Corp.	420.0	54.0	28.0	Vancouver, B. C.	Baltimore, Md.	10,000	6,024	4,685
Calif.	17	7	45	18	8	49	18	16	50	18	16	50	German	Robald Line	216.5	32.9	14.2	Guayaquil, Ecuador	Cristobal, C. Z.	956	1,105	698
Setota	18	8	48	18	8	48	18	16	50	18	16	50	American	U. S. Navy	155.0	30.0	14.2	Balboa, C. Z.	Cristobal, C. Z.	10,296	11,724	8,266
Deldtdijk	18	7	40	18	9	40	18	17	05	18	17	05	Dutch	Holland-American Line	490.0	64.6	30.0	Vancouver, B. C.	Rotterdam, Holland	10,296	11,724	8,266
Commander	18	12	15	18	13	06	18	19	50	18	19	50	American	U. S. Navy	370.0	53.2	20.0	Balboa, C. Z.	Gatun Lake, C. Z.	4,542	5,668	4,297
Mundella	18	12	15	18	13	06	18	19	50	18	19	50	American	Munson, McCor'k Line	324.0	46.2	22.0	Vancouver, B. C.	New York, N. Y.	3,500	3,985	2,680
Buffalo Bridge	18	14	00	18	13	29	18	20	30	18	20	30	British	Charles Nelson & Co.	407.0	52.2	27.0	Seattle, Wash.	New York, N. Y.	7,352	6,237	4,353
San Rosendo	18	14	50	18	14	42	18	22	00	19	2	40	British	Anglo-Mexican Oil Co.	385.3	51.2	24.0	Los Angeles, Calif.	Lands End, Eng.	5,119	6,224	4,465
Pennmar	18	15	40	18	16	48	19	11	25	19	11	25	American	Calmar S. S. Corp.	398.1	54.7	23.4	Portland, Ore.	Baltimore, Md.	5,339	6,858	5,308
Taranger	18	15	50	18	16	36	19	12	35	19	12	35	Norwegian	Westfal, Larsen & Co.	398.1	54.7	23.4	Vancouver, B. C.	Santa Fe, Ariz.	6,646	24,506	17,565
California	18	12	12	19	6	12	19	13	50	19	14	50	American	Panama-Pacific Line	574.4	80.3	29.4	San Francisco, Cal.	New York, N. Y.	6,646	24,506	17,565

** For orders.

** Tug.

* Motor ship.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Nature.	Tons.			Gross.	Net.		
St. Michel	18	19	6:58	19	15:00	20	11:05	American.	U. S. Army.	448.0	58.2	25.4	Balboa, C. Z.	New York, N. Y.	Army supplies.	9,310	7,978	5,385	
Brunaire	18	19	7:15	19	16:35	19	23:00	French.	Cie. Nationale de Nav.	324.3	58.4	26.0	Los Angeles, Calif.	Lands End, Eng.	Gasoline.	8,048	8,015	5,71	
Takano Maru	18	14	20	19	7:48	19	23:41	Japanese.	Nippon Yusen Kaisha.	445.0	58.0	27.0	Manila, P. I.	New York, N. Y.	(16)	4,242	5,403	3,960	
Cherry Branch	18	20	30	19	7:53	19	18:10	British.	F. & W. Ratoon.	400.5	51.9	20.2	Coral, Chile.	Liverpool, England	(17)	5,089	7,097	5,065	
Panaman	19	2	58	19	7:53	19	18:40	American.	Amer.-Hawaiian Line.	407.7	53.7	24.0	Portland, Oreg.	Boston, Mass.	General.	2,166	2,097	1,499	
Santa Rita	18	14	05	19	9:45	19	17:40	American.	Grace Line.	370.0	53.2	20.0	Talcahuano, Chile.	New York, N. Y.	(18)	8,000	9,294	6,865	
Lillian	19	6	54	19	10:00	19	19:20	American.	Lackenbach Line.	449.0	60.0	30.4	Portland, Oreg.	Boston, Mass.	Lumber, general.	13,260	9,607	6,548	
Chester Sun	19	6	55	19	10:50	19	19:55	American.	Sun Oil Co.	480.0	66.0	28.2	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline.	8,713	7,068	5,303	
Sham	19	7	40	19	11:31	19	20:35	Danish.	East Asiatic Co.	410.0	55.2	28.0	Vancouver, B. C.	Copenhagen, Den.	Wheat, general.	7,050	6,242	4,449	
Botkisan Maru	19	9	00	19	12:28	19	21:05	Japanese.	Mitsui Sussan K. K.	385.0	51.0	28.0	Portland, Oreg.	Belfast, Ireland.	Wheat.	5,344	7,834	6,018	
Boedgraven	19	13	30	19	14:31	19	22:00	Dutch.	Royal Neth. S. S. Co.	400.9	58.2	29.0	Corral, Chile.	Hamburg, Germany	General.	5,906	7,473	5,533	
Erfurt	19	23	00	19	6:29	20	15:10	German.	North German Lloyd	360.6	51.0	14.2	Champerico, Guat.	New Orleans, La.	Lumber, general.	7,187	6,264	4,706	
Robin Hood	19	23	00	20	7:03	20	14:50	American.	Ishman S. S. Lines	424.8	53.2	24.0	Everett, Wash.	Baltimore, Md.	Rice.	6,675	5,404	3,970	
Sijstestad	20	5	25	20	7:18	20	16:00	Norwegian.	Fern Line	308.0	51.5	24.3	Kobsohang, Siam.	Habana, Cuba.	Rice.	9,863	6,099	5,338	
Sorvard	20	6	00	20	7:49	20	17:10	Norwegian.	S. L. Kloster.	451.8	59.2	26.0	Bangkok, Siam.	Lands End, Eng.	Gasoline.	5,202	5,370	3,467	
Lion	20	5	45	20	13:12	20	20:00	Norwegian.	Anglo-Saxon Pet. Co.	373.9	62.8	25.0	Los Angeles, Calif.	Cobb, Ireland.	Wheat.	20,669	15,476	4,354	
Patricia	20	12	30	20	13:21	20	20:25	German.	Hamburg-American Line	460.0	62.8	25.0	Portland, Oreg.	Bremen, Germany	Crude oil.	8,618	8,016	5,854	
Voco	20	18	00	20	19:09	21	11:35	British.	Vacuum Oil Co.	550.0	56.2	35.0	Pt. San Luis, Calif.	Baltimore, Md.	Iron ore.	8,308	9,267	6,834	
Bethore	21	2	25	21	6:06	21	17:00	American.	Ore S. S. Corp.	435.9	62.8	28.0	Cruz Grande, Chile	Oslo, Norway.	General.	4,055	5,616	3,879	
Knute Nelson	19	7	00	21	6:40	21	16:00	Norwegian.	Fred Olsen & Co.	481.5	61.1	26.0	Vancouver, B. C.	Oslo, Norway.	Grain, flour, gen.	505	1,182	742	
Seattle	21	5	00	21	7:33	21	15:30	German.	Hamburg-American Line	461.5	61.1	26.0	Seattle, Wash.	Hamburg, Germany	General.	8,373	6,413	4,219	
Golden Gate	21	6	00	21	7:51	21	17:20	Norwegian.	Scand.-So. Pacific Co.	381.5	53.1	18.0	Corral, Chile.	Oslo, Norway.	General.	7,062	6,205	4,286	
Gen. Wm. M.																			
Graham	21	8	02	21	15:15			American.	U. S. Army.	180.2	32.0		Balboa, C. Z.	Cristobal, C. Z.	General.	505	1,182	742	
Baralt	21	11	00	21	12:00	21	18:20	Dutch.	Royal Neth. S. S. Co.	202.9	33.1	12.0	Machalilla, Ecuador	Cristobal, C. Z.	General.	8,373	6,413	4,219	
Benary	21	11	40	21	12:27	21	19:50	British.	U. S. Tankship Corp.	420.0	54.0	26.2	N. West Fr., B. C.	Leith, Scotland.	(19)	7,062	6,205	4,286	
Castana	21	12	35	21	13:37	21	22:40	American.	U. S. Tankship Corp.	390.0	54.2	25.0	Kahului, T. H.	Mobile, Ala.	Molasses.	9,350	9,033	5,938	
K. K.																			
Kingsbury	21	22	52	22	6:27	22	14:15	American.	Standard Oil Co. of Cal.	440.0	58.2	30.0	Los Angeles, Calif.	Perth Amboy, N. J.	Gasoline.	11,833	9,191	5,278	
Ontarolite	21	23	00	22	6:41	22	15:30	British.	Imperial Oil Co.	470.0	63.2	29.0	Lobitos, Peru	Halifax, N. S.	Crude oil.	2,030	3,158	1,676	
Essequibo	22	5	20	22	7:21	22	14:50	British.	Pacific Steam Nav. Co.	450.3	57.8	23.0	Talcahuano, Chile.	New York, N. Y.	General.	13,250	9,609	6,551	
Pacific Sun	22	5	30	22	7:49	22	16:05	American.	Sun Oil Co.	480.6	66.0	28.2	Longbeach, Calif.	New York, N. Y.	Gasoline.	3,361	6,597	4,989	
City of	21	17	30	22	8:48	22	17:20	British.	British-Can. Steamships	411.5	54.1	24.0	Vancouver, B. C.	London, England.	Lumber, wheat.	7,264	6,476	4,682	
Victoria	22	4	00	22	8:10	22	17:55	American.	Status S. S. Co.	423.9	54.4	19.0	Portland, Oreg.	Philadelphia, Pa.	Lumber, general.	6,506	7,983	5,916	
San Clemente	22	4	31	22	9:12	22	18:25	American.	Amer.-Hawaiian Line.	434.3	57.7	23.0	Seattle, Wash.	Boston, Mass.	General.	19	Copper, lead, and produce.		
Arizona	22	4	31	22	18:25	22	18:25	American.	U. S. Tankship Corp.	434.3	57.7	23.0	Seattle, Wash.	Boston, Mass.	General.	19	Copper, lead, and produce.		

(16) Cotton, nitrates, and copper.

(17) Cotton, nitrates, and copper.

(18) Sugar, peanuts, oil, rice, and general.

(19) Mine planter.

(20) Motor ship.

(21) Lumber, wheat, and zinc.

Attn-	Date	Vessel	Line	From	Date	Vessel	Line	For
monarch	22 12 35	Tolosa	United Fruit Co.	Port Limon, Costa Rica.	August 17	No. 945-M	Pan American Airways	Talara via wayports.
Vancouver	22 11 00	Peru	French Line	St. Nazaire via wayports.	August 17	No. 9670	Pan American Airways	San Salvador and waypts.
Chilore	22 6 00	Loutaro	Pacific Steam Navigation Co.	High seas for repairs.	August 17	No. 9776	Pan American Airways	Miami via wayports.
Clydesfield	22 17 10	Pastores	United Fruit Co.	New York via Habana.	August 17	Tolosa	United Fruit Co.	New York via Habana.
El Aleto	22 23 00	Darien C-35	Standard Airplane Co.	Barraquilla and waypts.	August 17	Aneon	Panama R. I. S. S. Line	New Orleans and way pts.
Annetta I	22 4 00	Sparholm	Aluminium Line	Kingston, Jamaica.	August 17	Heredia	United Fruit Co.	New Orleans and way pts.
Steel Inventor.	23 8 10	Dorelan	Leyland S. S. Line	Liverpool via wayports.	August 18	Pasajero	Goigh Brothers	Port Limon, Costa Rica.
Port	23 9 27	No. 9685	Pan American Airways	San Salvador and waypts.	August 19	No. 945-M	Aluminium Line	La Guayra and wayports.
Freemantle	23 9 27	No. 945-M	Pan American Airways	Talara via wayports.	August 20	No. 9685	Pan American Airways	San Salvador and waypts.
S-14	23 9 27	Camden	United Fruit Co.	Curacao, D. W. I.	August 20	Pastores	United Fruit Co.	Port Limon, Costa Rica.
S-16	23 9 34	Camden	United Fruit Co.	Pto. Colombia, Colombia	August 20	No. 142-M	Pan American Airways	Miami via wayports.
S-17	23 9 34	Castilla	United Fruit Co.	New Orleans, La.	August 21	French Line	French Line	Havre via wayports.
Navy Launch.	23 9 30	No. 9670	Pan American Airways	San Salvador and waypts.	August 21	Inapaquina	A. Tagaropoulos	Colon, Rep. of Panama.
Dixie Arrow	23 10 29	No. 9187	Pan American Airways	Miami via wayports.	August 21	No. 300-N	Pan American Airways	Talara via wayports.
Sun	23 5 05	Camden	Colombian S. S. Line	New York via Panama.	August 21	Metapan	Pan American Airways	Pt. Cabello and wayports.
Sun	23 5 05	Camden	Standard Fruit & S. S. Co.	New York via wayports.	August 21	Castilla	United Fruit Co.	New York via wayports.
Lake Ormie	23 12 45	Camden	United Fruit Co.	New Orleans and Habana.	August 21	Camden	United Fruit Co.	Pto. Colombia, Colombia.
Lake George	23 15 00	Camden	United Fruit Co.	Port Cabello via wayports.	August 22	Darien C-35	Standard Airplane Co.	Barraquilla and waypts.
Kellerwald	23 15 00	Camden	Pan American Airways	Miami via wayports.	August 22	No. 9670	Pan American Airways	San Salvador and waypts.
			Pan American Airways	San Salvador and waypts.	August 23	Bridgeown	United Fruit Co.	New Orleans and waypts.
			Pan American Airways	Talara via wayports.	August 23	Irioma	United Fruit Co.	New Orleans and waypts.
			Pan American Airways	Talara via wayports.	August 23	Anapala	Standard Fruit & S. S. Co.	New Orleans and waypts.

²⁹ Yaelt. ²² Submarine. ²³ Barley, copper, fruit, and general. ²⁴ Barley, wheat, and canned goods. ²⁵ Orca, sugar, oil cake, and copper. ²⁶ Motor schooner. ²⁷ Motor boat. ²⁸ Air Mail carrier. ²⁹ Other than ships passing through the Canal.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL

Date	Vessel	Line	From	Date	Vessel	Line	For
August 17	Tolosa	United Fruit Co.	Port Limon, Costa Rica.	August 17	No. 945-M	Pan American Airways	Talara via wayports.
August 18	Peru	French Line	St. Nazaire via wayports.	August 17	No. 9670	Pan American Airways	San Salvador and waypts.
August 18	Loutaro	Pacific Steam Navigation Co.	High seas for repairs.	August 17	No. 9776	Pan American Airways	Miami via wayports.
August 18	Pastores	United Fruit Co.	New York via Habana.	August 17	Tolosa	United Fruit Co.	New York via Habana.
August 18	Darien C-35	Standard Airplane Co.	Barraquilla and waypts.	August 17	Aneon	Panama R. I. S. S. Line	New Orleans and way pts.
August 18	Sparholm	Aluminium Line	Kingston, Jamaica.	August 17	Heredia	United Fruit Co.	New Orleans and way pts.
August 19	Dorelan	Leyland S. S. Line	Liverpool via wayports.	August 18	Pasajero	Goigh Brothers	Port Limon, Costa Rica.
August 19	No. 9685	Pan American Airways	San Salvador and waypts.	August 19	No. 945-M	Aluminium Line	La Guayra and wayports.
August 20	No. 945-M	Pan American Airways	Talara via wayports.	August 20	No. 9685	Pan American Airways	San Salvador and waypts.
August 20	Camden	United Fruit Co.	Curacao, D. W. I.	August 20	Pastores	United Fruit Co.	Port Limon, Costa Rica.
August 20	Camden	United Fruit Co.	Pto. Colombia, Colombia	August 20	No. 142-M	Pan American Airways	Miami via wayports.
August 20	Irioma	United Fruit Co.	New York via Kingston.	August 20	Peru	French Line	Havre via wayports.
August 20	Castilla	United Fruit Co.	New Orleans, La.	August 21	Inapaquina	A. Tagaropoulos	Colon, Rep. of Panama.
August 20	No. 9670	Pan American Airways	San Salvador and waypts.	August 21	No. 300-N	Pan American Airways	Talara via wayports.
August 20	No. 9187	Pan American Airways	Miami via wayports.	August 21	Metapan	Pan American Airways	Pt. Cabello and wayports.
August 21	Inapaquina	A. Tagaropoulos	New York via Panama.	August 21	Castilla	United Fruit Co.	New York via wayports.
August 21	Bridgeown	Colombian S. S. Line	New York via wayports.	August 21	Camden	United Fruit Co.	Pto. Colombia, Colombia.
August 22	Cartago	Standard Fruit & S. S. Co.	New Orleans and Habana.	August 21	Darien C-35	Standard Airplane Co.	Barraquilla and waypts.
August 23	Camden	United Fruit Co.	Port Cabello via wayports.	August 22	No. 9670	Pan American Airways	San Salvador and waypts.
August 23	Nueva Espana	Diez & Garcia	Col. Rep. of Panama.	August 22	Bridgeown	United Fruit Co.	New Orleans and waypts.
August 23	No. 144-M	Pan American Airways	Miami via wayports.	August 23	Irioma	United Fruit Co.	New Orleans and waypts.
August 23	No. 9776	Pan American Airways	San Salvador and waypts.	August 23	Anapala	Standard Fruit & S. S. Co.	New Orleans and waypts.
August 23	No. 9685	Pan American Airways	San Salvador and waypts.	August 23	Anapala	Standard Fruit & S. S. Co.	New Orleans and waypts.
August 23	No. 300-N	Pan American Airways	Talara via wayports.	August 23	Anapala	Standard Fruit & S. S. Co.	New Orleans and waypts.

(Continued on page 60, column 2.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending August 23, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Buenaventura	Panama R. R. S. S. Line	August 7	August 9	1,469	37
Magdalena	Hamburg-American Line		August 10		631
Washington	French Line		August 10		212
Parismina	United Fruit Co.		August 10		5
Durazzo	Hamburg-American Line		August 10		133
Calamares	United Fruit Co.	August 10	August 10	19	309
Guayaquil	Panama R. R. S. S. Line	August 10	August 10	238	(²)
Colombo	Italian Line	August 10	August 11	292	2
Wanua	Standard Fruit & S. S. Co.	August 10	August 11	353	(²)
Lochgoil	Royal Mail Steam Packet Co.	August 10	August 11	38	496
Alvarado	Pacific Steam Navigation Co.	August 10	August 11	35	40
Nebraska	Royal Mail Steam Packet Co.	August 10	August 11	(¹)	78
Tela	United Fruit Co.		August 11		110
Emil Kirdorf	Hamburg-American Line	August 11	August 11	229	2
Santa Inez	Grace Line	August 11	August 12	33	180
Guatemala	Panama Mail S. S. Co.	August 11	August 12	309	174
Santa Tecla	N. O. & S. A. S. S. Co.	August 11	August 12	32	(²)
Tolosa	United Fruit Co.	August 11	August 13	565	61½
San Marcos	States S. S. Co.	August 12	August 12	11	(²)
Manizales	North German Lloyd		August 12		133
Nitokris	Hamburg-American Line	August 12	August 12	71	25
Pearl Marie	R. Feuillebois	August 12	August 12	(¹)	14½
Lagarto	Pacific Steam Navigation Co.	August 12	August 12	59	89
Dramatist	T. & J. Harrison	August 12	August 13	228	(²)
Van Rensselaer	Royal Netherlands S. S. Co.	August 12	August 13	14½	19
Kinderdijk	Holland-American Line	August 12	August 13	366	2
Alda	North German Lloyd	August 12	August 13	21	114
Archer	Roosevelt Line	August 13	August 13	101	(²)
Pacific Pioneer	Furness, Withy & Co.	August 13	August 14	(¹)	221
Bellasco	Aluminium Line	August 13	August 14	251	(²)
Irona	United Fruit Co.	August 13	August 14	1,004	43
Santa Marta	United Fruit Co.	August 13	August 14	429	170
Swiftlight	C. D. Mallory	August 13	August 14	12,269	(²)
H. H. Rogers	Standard Shipping Co.	August 13	August 15	14,799	(²)
Ancon	Panama R. R. S. S. Line	August 13		4,542	
C. C. Acme	Maxwell Newball	August 13	August 15	10	(²)
Cauca	National Navigation Co.		August 14		296
Marie Bakke	Scandinavian-South Pacific Co.	August 14	August 14	29	(²)
Colombia	Panama Mail S. S. Co.	August 14	August 15	378	171
Bogota	Colombian S. S. Line	August 14	August 15	½	77
Daytonian	Leyland S. S. Line	August 14	August 15	(¹)	143
Tatoma	Hamburg-American Line	August 14	August 16	104	484
Manuel Arnus	Spanish Line	August 14	August 14	160	
Tela	United Fruit Co.	August 15	August 16	3	128
Van Rensselaer	Royal Netherlands S. S. Co.	August 15	August 16	(¹)	192
Atlantida	Standard Fruit & S. S. Co.	August 15	August 16	872	295
San Mateo	United Fruit Co.	August 16	August 16	744	136
Heredia	United Fruit Co.	August 16	August 16	154	
Santa Clara	Grace Line	August 16	August 16	113	½
Dora K.	R. Feuillebois	August 16	August 16	(²)	7½
Ebro	Pacific Steam Navigation Co.	August 16	August 16	19	
Lautaro	Pacific Steam Navigation Co.	August 16	August 16	73	
Corinto	Panama Mail S. S. Co.		August 16		987
Ancon	Panama R. R. S. S. Line		August 17		527
Manuel Arnus	Spanish Line		August 17		560
Heredia	United Fruit Co.		August 17		30
Ebro	Pacific Steam Navigation Co.		August 17		219
Tolosa	United Fruit Co.	August 17	August 17	3	31½
Caldas	National Navigation Co.	August 17	August 18	80	69
Delftdijk	Holland-American Line	August 18	August 18	(²)	2
Leme	Nav. Libera-Triestina	August 18	August 18	(²)	140
Sparreholm	Aluminium Line	August 18	August 19	169	(²)
Pastores	United Fruit Co.	August 18	August 20	465	9
Perou	French Line	August 18	August 20	57	739
Cali	North German Lloyd	August 18	August 21	956½	363
Tatsuno Maru	Nippon Yusen Kaisha	August 19	August 19	456	(²)
Santa Rita	Grace Line	August 19	August 19	97	81
Bodegraven	Royal Netherlands S. S. Co.	August 19	August 20	172	20
Santa Barbara	Grace Line	August 20	August 20	150	298
San Julian	States S. S. Co.	August 20	August 20	16½	(²)
Castilla	United Fruit Co.	August 20	August 21	1,022	37
Camden	United Fruit Co.	August 20	August 21	7,508	(²)
Metapan	United Fruit Co.	August 20	August 21	711	80
Irona	United Fruit Co.	August 20	August 23	52	72
Golden Gate	Knute Nelson Line	August 21	August 21	20	(²)
Seattle	Hamburg-American Line	August 21	August 21	56	46
Orbita	Pacific Steam Navigation Co.	August 21	August 21	116	132
Knute Nelson	Fred Olsen Line	August 21	August 22	(¹)	118
Drechedijk	Holland-American Line	August 21	August 22	9	386

² No cargo discharged.

² No cargo laded.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Baralt.....	Royal Netherlands S. S. Co.....	August 21.....	.....	507	.....
Bridgetown.....	Colombian S. S. Line.....	August 21.....	August 22.....	79	474
Nosa Chief.....	N. O. & S. A. S. S. Co.....	August 21.....	August 22.....	138	233
Balboa.....	Johnson Line.....	August 21.....	August 22.....	51	83
Rialto.....	Nav. Libera-Triestina.....	August 21.....	August 22.....	107	(²)
San Clemente.....	States S. S. Co.....	August 22.....	August 22.....	2	(²)
Essequibo.....	Pacific Steam Navigation Co.....	August 22.....	August 22.....	12	(²)
Carl Legien.....	Hamburg-American Line.....	August 22.....	August 23.....	10	167
Amapala.....	Standard Fruit & S. S. Co.....	August 22.....	August 23.....	111	388
Port Fremantle.....	Commonwealth & Dominion Line.....	August 23.....	August 23.....	58	(²)
Cartago.....	United Fruit Co.....	August 23.....	.....	34	.....
Champerico.....	Pacific Steam Navigation Co.....	.....	August 23.....	.....	432
Alaska.....	French Line.....	August 23.....	.....	412	.....

¹ No cargo discharged.

² No cargo laded.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Official Circulars.

Acting Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 22, 1930.

To all concerned.—Effective August 23, 1930, and during my absence from the Isthmus, Lieut. Col. J. L. Schley, U. S. A., Engineer of Maintenance, will act as Governor.

H. BURGESS,
Governor.

Duties of President of Panama Railroad Company.

PANAMA RAILROAD COMPANY,
OFFICE OF THE PRESIDENT,
BALBOA HEIGHTS, C. Z., August 22, 1930.

To all concerned.—Effective August 23, 1930, and during my absence from the Isthmus, Lieut. Col. J. L. Schley, U. S. A., 2d Vice President, will perform such duties of the President as relate to the operation of the Company on the Isthmus.

H. BURGESS,
President.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.20 per barrel, Diesel oil \$1.80 per barrel, at Balboa and Cristobal.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$8 per ton of 2,240 pounds at Cristobal, and \$11 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Trips Through the Canal.

The following lines operating passenger vessels through the Canal carry local passengers from one terminal to the other: Panama Mail Steamship Company, Pacific Steam Navigation Company, Grace Line, Chilean Line, Navigazione Generale Italiana, Hamburg-American Line. The Panama Mail and Hamburg-American Line charge \$6 for the trip, the others \$10 for first-class passage. The Chilean Line has also a rate of \$4 for intermediate class, and the Panama-Pacific Line a rate of \$6 for tourist class. The several services together afford about 4 transits of the Canal each way every week.

Binders for The Panama Canal Record.

Cardboard covers, punched and fitted with brass fasteners forming binders for THE PANAMA CANAL RECORD are offered for sale at 25 cents a set, for the benefit of those who wish to keep a file of the issues for ready reference. Orders may be addressed to The Panama Canal, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 57.

PORT OF BALBOA.

* ARRIVALS.			* DEPARTURES.		
Date.	Vessel.	Line.	Date.	Vessel.	Line.
August 17	Bokuyo Maru	Nippon Yusen Kaisha	August 17	Bokuyo Maru	Nippon Yusen Kaisha
August 17	S. A. Perkins	James Griffiths & Sons	August 22	S. A. Perkins	James Griffiths & Sons
August 17	Emma Maersk	Standard Oil Co.	August 19	Emma Maersk	Standard Oil Co.
August 18	City of Panama	Panama Mail S. S. Co.	August 23	City of Panama	Panama Mail S. S. Co.
August 22	Suriname	United Fruit Co.	August 23	Suriname	United Fruit Co.
August 22	La Union	A. Valdez	August 22	La Union	A. Valdez
August 22	Doa Hermanos	A. Valdez	August 22	Doa Hermanos	A. Valdez
August 23	Real	Hans Elliot.	August 23	Real	Hans Elliot.
August 23	Sambu	Hans Elliot.	August 23	Sambu	Hans Elliot.
August 23	City of Panama	Panama Mail S. S. Co.			
					Valparaiso, Chile.
					Santa Rosalia, Mexico.
					Talara, Peru.
					Buenaventura, Colombia.
					San Francisco, Calif.
					Panama Bay, R. P.
					Panama Bay, R. P.
					Panama Bay, R. P.
					Panama Bay, R. P.

* Other than ships passing through the Canal.

²⁹ Motor schooner.

²⁸ Motor ship.

²⁷ Tanker.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., September 3, 1930. No. 5.

Canal Traffic During August.

During the month of August, 1930, 465 commercial vessels and 19 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,080,230.42, and on the launches \$111.00, or a total tolls collection of \$2,080,341.42.

The daily average of commercial vessels was 15.00 and the average tolls collection was \$67,104.21, as compared with 15.74 and \$70,341.19 for the previous month, and an average of 17.45 transits and \$75,078.64 for August, 1929. The average amount of tolls paid by each of the commercial transits was \$4,473.61, as compared with \$4,468.23 for the month of July, 1930.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 8 months of the current calendar year, with the daily averages of transits and tolls, together with the totals for the first 8 months of the calendar years 1929 and 1928:

	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January.....	531	\$2,360,211.24	17.13	\$76,135.84
February.....	491	2,131,386.12	17.54	76,120.93
March.....	515	2,260,002.36	16.61	72,903.30
April.....	489	2,232,763.00	16.30	74,425.43
May.....	479	2,162,898.60	15.45	69,770.92
June.....	478	2,100,994.53	15.93	70,033.15
July.....	488	2,180,576.77	15.74	70,341.19
August.....	465	2,080,230.42	15.00	67,104.21
Total, first 8 months of calendar year 1930.....	3,936	17,509,063.04	16.20	72,053.76
Total, first 8 months of calendar year 1929.....	4,296	18,351,101.91	17.68	75,518.94
Total, first 8 months of calendar year 1928.....	4,184	17,320,819.68	17.14	70,986.96

As compared with the first 8 months of the calendar year 1929, the corresponding period of this year has had 360 fewer transits and \$842,038.87 less tolls.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 30, 1930.

No. 742.

Panama Canal, approaches to Pacific entrance, buoy established marking wreck. On August 28, 1930, a red and black, horizontal striped nun buoy was placed in 7 feet of water at low tide, 400 yards and bearing 315 degrees (true) from channel buoy No. 9. This buoy is 80 yards outside of and westward of the Canal prism and marks the stern of a sunken sand barge.

J. L. SCHLEY,
Acting Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, August 30, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.			Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	T ons.	Gross.		Net.
Alaska	23	14.10	24	6.10	24	13.35	24	15.10	French.	French Line.	425.0	55.0	22.2	Havre, France.	Talcahuano, Chile.	General.	3,678	6,990	4,854
Caldas	22	21.30	24	6.55	24	13.35	24	15.30	Colombian.	National Navigation Co.	114.0	21.1	10.0	Port Limon, C. R.	Buenaventura, Col.	General.	245	211	124
Sagadahoc	23	20.00	24	7.05	24	14.55	24	15.12	American.	Argonaut S. S. Line.	420.5	54.2	25.3	Baltimore, Md.	Portland, Ore.	Steel, general.	6,757	7,345	5,357
China Arrow	24	1.30	24	8.15	24	15.30	24	16.30	American.	Standard Transp. Co.	468.3	62.7	19.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	10,084	10,084	3,388
Benjamin Franklin	24	4.45	24	12.25	24	18.25	25	19.08	Norwegian.	Fred Olsen & Co.	452.0	59.5	18.8	Osto, Norway.	Vancouver, B. C.	(⁹)	2,576	9,082	6,140
Tamihua	24	14.50	24	15.00	24	21.50	25	1.42	American.	Richfield Oil Co.	500.0	71.2	19.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	11,667	8,542	5,542
Challenger	24	19.10	24	19.25	25	9.40	25	11.00	American.	Isthmian S. S. Lines	410.0	56.0	24.6	Baltimore, Md.	Vancouver, B. C.	Steel, general.	6,047	7,780	5,811
Donau	24	12.30	25	6.00	25	13.13	25	14.25	German.	North German Lloyd	520.8	53.6	21.6	Bremen, Germany	Los Angeles, Calif.	General.	2,925	11,007	7,698
Anna Maersk	24	18.15	25	6.10	25	13.44	25	15.00	Danish.	A. P. Moller.	390.6	53.7	16.3	Falmouth, England	Los Angeles, Calif.	Ballast.	6,012	4,097	4,097
Peapack	24	22.10	25	8.00	25	15.13	25	16.20	British.	Barber S. S. Line.	464.6	60.3	20.6	New York, N. Y.	Hongkong, China.	General, case oil.	4,264	8,859	6,094
Constance	24	23.45	25	7.30	25	14.32	25	16.00	American.	Arrow Line.	409.6	54.2	16.6	Baltimore, Md.	Seattle, Wash.	Lumber, general.	3,000	6,621	4,891
Chandler	25	3.30	25	9.15	25	16.05	25	18.25	American.	Nelson Line.	377.0	52.0	17.10	New York, N. Y.	Seattle, Wash.	General, pipe.	2,566	5,434	3,969
Democracy	25	00.05	25	10.18	25	16.38	25	21.25	Swedish.	Johnson Line.	393.0	52.6	18.3	Stockholm, Sweden	San Francisco, Cal.	General, cement.	2,318	6,642	4,860
Axel Johnson	24	23.50	25	10.30	25	17.56	25	19.08	American.	Tidewater Oil Co.	480.6	66.0	22.0	Chester, Pa.	San Francisco, Cal.	Ballast.	7,001	9,734	6,349
Tidewater	25	11.30	25	11.40	25	18.43	26	1.27	Norwegian.	A. F. Klaveness & Co.	377.0	54.0	23.6	Tampico, Mexico.	Adelaide, Australia	Subbur, asphalt.	7,001	6,079	4,534
Snestad	25	13.15	25	13.40	25	20.29	25	23.06	Norwegian.	Westfal, Larsen & Co.	309.0	54.0	21.4	Buenos Aires, Arg.	N. Westminster, B. C.	Coffee, etc.	5,319	6,853	5,246
Brimmanger	25	13.15	25	13.40	25	20.29	25	23.06	Norwegian.	Westfal, Larsen & Co.	309.0	54.0	21.4	Buenos Aires, Arg.	N. Westminster, B. C.	Coffee, etc.	5,319	6,853	5,246
N. T. Nielson	25	14.45	25	15.05	25	22.45	25	23.54	Norwegian.	Melsom & Melsom.	481.7	57.2	29.6	Larvik, Norway.	Hobart, Tasmania	Ballast.	10,388	7,609	7,609
Alonso	25	14.55	26	6.00	26	12.41	27	00.47	American.	Grace Line.	360.2	51.6	21.5	New York, N. Y.	Talcahuano, Chile	General.	1,271	5,726	4,086
Santa Teresa	26	2.15	26	7.20	26	14.05	27	2.46	American.	U. S. Army.	490.0	55.4	25.0	New York, N. Y.	San Francisco, Cal.	General.	308	.....	.....
Grant	26	2.15	26	7.20	26	14.05	27	2.46	American.	U. S. Army.	490.0	55.4	25.0	New York, N. Y.	San Francisco, Cal.	General.	308	.....	.....
S-13	26	7.35	26	14.38	26	23.16	26	23.16	American.	U. S. Navy.	231.0	21.10	.....	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	7,978	5,839	5,839
Pat Doherty	26	12.05	26	12.15	26	19.23	26	23.16	American.	Richfield Oil Co.	430.2	59.2	19.0	Baltimore, Md.	Los Angeles, Calif.	Ballast.	1,657	5,710	4,011
El Salvador	25	12.20	26	12.35	26	19.48	27	13.25	American.	Panama Mail S. S. Co.	360.0	51.0	23.8	New York, N. Y.	San Francisco, Cal.	General, coffee.	1,585	5,183	4,742
Barat	21	18.20	26	14.00	26	21.12	26	22.36	Dutch.	Royal Neth. S. S. Co.	200.0	33.0	12.10	Cristobal, C. Z.	Buenaventura, Col.	General.	2,674	6,383	4,631
Widd	25	22.25	26	14.25	26	20.34	26	21.55	German.	Roland Line	393.4	54.0	19.0	Hamburg, Germany	San Antonio, Chile	General.	4,267	4,759	3,660
Haarlem	25	13.50	26	14.40	26	22.02	26	23.16	Dutch.	Royal Neth. S. S. Co.	361.5	49.6	22.0	Hamburg, Germany	Corral, Chile.	General.	1,578	10,476	7,063
Wyoming	26	11.50	26	15.17	26	22.25	26	23.16	French.	French Line	470.0	61.2	20.10	Dunkirk, France.	Vancouver, B. C.	General.	7,482	5,143	5,143
Cathwood	26	14.20	26	15.40	26	23.15	27	00.47	American.	Union Oil Co.	435.0	56.0	18.0	Baltimore, Md.	Los Angeles, Calif.	Ballast.	7,859	6,585	4,791
Vermar	26	00.30	26	19.15	27	11.35	27	12.45	American.	Calmar S. S. Line.	410.0	54.2	22.8	Philadelphia, Pa.	Seattle, Wash.	General, steel.	840	12,941	9,329
Virgilio	25	3.20	27	6.00	27	14.18	27	15.30	Italian.	Nav. Gen. Italiana	484.0	61.0	26.6	Genoa, Italy.	Valparaiso, Chile	General.	2,273	.....	.....
Kenowis	22	18.38	27	6.40	27	14.42	27	15.30	American.	U. S. Army.	390.0	54.2	17.7	New York, N. Y.	San Francisco, Cal.	Army supplies.	2,273	238	163
Cauca	25	17.00	27	6.00	27	15.06	27	16.55	Colombian.	National Navigation Co.	107.0	22.0	7.0	Cristobal, C. Z.	Pt. Armañes, R.P.	General.	626	.....	.....
Somme	27	6.05	27	7.15	27	15.36	28	3.23	American.	U. S. Army.	436.0	58.0	22.6	Brooklyn, N. Y.	San Francisco, Cal.	Army supplies.	2,668	6,754	4,800
Oregonian	26	17.25	27	7.30	27	15.57	27	17.00	American.	Amer.-Hawaiian Line	404.0	52.9	20.0	Boston, Mass.	Seattle, Wash.	General.	1,921	8,218	6,037
Silverbell	27	4.55	27	8.30	27	16.29	27	17.30	British.	Silver Line, Ltd.	425.6	58.3	17.6	Beaumont, Texas.	Calcutta, India.	Batching oil.	.....	.....	.....

¹ Tanker.

² Motor ship.

³ Whaler.

⁴ Transport.

⁵ Submarine.

⁶ General, steel, and cement.

Gen. John Mc E. Hyde	26	23.05	27	9.00	27	16.41	27	17.18	27	18.30	American	U. S. Army	150.0	28.0	10.6	Key West, Fla. New York, N. Y.	Manila, P. I. Los Angeles, Calif.	Ballaast.	7,386	5,117
Ario V. Susan V.	27	10.10	27	11.05	27	17.43	27	18.46	27	18.30	American	Standard Oil Co.	435.6	56.2	20.0	New York, N. Y.	Los Angeles, Calif.	Ballaast.	7,386	5,117
Arweco	27	10.20	27	11.05	27	17.43	27	18.46	27	18.30	American	Luckenbach Line	434.0	57.4	20.0	New York, N. Y.	Seattle, Wash.	General	3,700	7,947
Parthena	26	2.05	27	13.40	27	20.18	27	23.00	27	23.00	British	East Asiatic Co.	225.4	34.0	16.6	Antwerp, Belgium.	Vancouver, B. C.	Wines and spirits	570	1,370
Pipiriki	27	19.20	27	19.35	28	9.07	28	10.35	28	10.35	American	Federal Steam Nav. Co.	472.5	59.3	22.6	New York, N. Y.	Sydney, Australia.	General	3,029	8,710
Mataroa	27	23.59	28	6.05	28	12.51	29	2.36	29	2.36	British	Shaw, Savill & Albion	500.4	63.0	27.0	London, England.	Wellington, N. Z.	General	5,201	13,590
Nuevo Panama	24	18.10	28	10.00	28	16.37	29	1.12	29	1.12	Panamaian	Hans Elliot	108.4	21.0	7.0	Antwerp, Belgium.	Pedregal, R. P.	Creosote.	9,413	7,496
Santa Isabel	28	10.50	28	11.00	28	18.10	28	19.20	28	19.20	American	Isthmian S. Lines	251.0	43.6	24.7	New York, N. Y.	Honolulu, T. H.	General, steel	150	266
Lake Benbow	28	11.25	28	12.41	28	19.59	29	2.57	29	2.57	American	Ford Motor Co.	290.5	45.8	18.0	Chrysler, Pa.	Portland, Ore.	General	3,263	2,823
Brazil Maru	28	12.45	28	13.25	28	20.45	28	21.55	28	21.55	Japanese	Kobun Line	335.0	51.0	23.0	New York, N. Y.	Yokohama, Japan.	Auto. parts	2,156	2,676
Santos Maru	28	13.30	28	14.30	28	22.00	28	23.00	28	23.00	German	Hamburg-American Line	387.0	48.0	16.0	Hamburg, Germany	Champatico, Guat.	Cotton, rosin, etc.	4,711	5,915
City of Dieppe	28	20.05	29	6.35	29	13.55	29	15.10	29	15.10	British	Osaka Shosen Kaisha.	430.0	56.0	20.0	Buenos Aires, Arg.	Kobe, Japan.	Cotton, hides	1,697	4,114
Pacific	28	17.35	29	9.50	29	16.45	29	17.50	29	17.50	Chilean	Ellerman & Bucknall.	465.0	58.3	24.5	New York, N. Y.	Adelaide, Australia.	General	2,888	9,521
Enterprise	26	16.55	29	11.45	29	19.19	29	20.23	29	20.23	British	Furness, Withy & Co.	435.0	60.1	20.0	Glasgow, Scotland.	Valparaiso, Chile.	General	1,843	7,764
Henderson	29	6.10	30	5.50	30	12.54	30	9.00	30	9.00	American	U. S. Navy	149.3	30.0	0.0	Cristobal, C. Z.	Balboa, C. Z.	Ballaast.	1,238	9,641
Ruahine	29	13.30	30	6.20	30	13.23	30	19.20	30	19.20	British	N. Z. Shipping Co.	482.0	60.3	26.5	Hampton Rds, Va.	San Francisco, Cal.	General, autos.	742	8,469
Salvador	29	13.40	30	7.00	30	14.59	30	16.20	30	16.20	British	Pacific Steam Nav. Co.	215.0	33.5	14.10	Cristobal, C. Z.	Timaru, N. Z.	General	650	1,970
La Perla	29	13.40	30	7.10	30	14.59	30	16.45	30	16.45	American	United Fruit Co.	325.0	48.0	18.8	Cristobal, C. Z.	Champatico, Guat.	Ballaast.	4,033	2,261
Silverwhut	29	20.30	30	7.35	30	15.17	30	16.30	30	16.30	British	Silver Line, Ltd.	455.0	61.9	24.10	New York, N. Y.	Manila, P. I.	General	8,200	9,570
Dochoet	30	0.40	30	8.25	30	15.50	30	16.55	30	16.55	American	Redwood Line	386.8	52.2	21.0	New Orleans, La.	Yacoua, Wash.	Sulphur, general	4,561	5,705
Manizales	28	15.10	30	8.35	30	16.17	30	19.05	30	19.05	German	North German Lloyd	216.5	32.9	11.8	Cristobal, C. Z.	Guayaquil, Ecuador	General	301	1,132
Steel Engineer	30	3.35	30	8.30	30	16.42	30	17.50	30	17.50	American	Isthmian S. Lines	424.0	56.2	23.0	Mobile, Ala.	San Antonio, Chile.	General	5,719	6,450
Dirigo	29	20.15	30	9.30	30	17.15	30	19.05	30	19.05	American	The Texas Co.	411.0	56.1	21.10	Santos, Brazil.	Los Angeles, Calif.	Ballaast.	6,931	5,009
Vigrid	28	18.50	30	10.55	30	17.58	30	19.20	30	19.20	Norwegian	Anglo-Saxon Pet. Co.	420.3	57.2	15.6	Hamburg, Germany	Los Angeles, Calif.	Ballaast.	7,442	5,132
Oklahoma	20	15.45	30	15.55	30	22.45	31	00.06	30	00.06	American	Richfield Oil Co.	430.0	59.2	15.0	New York, N. Y.	Los Angeles, Calif.	Ballaast.	3,038	9,154
Texas	30	18.35	30	19.05	31	10.30	31	11.55	31	11.55	American	Amer-Hawaiian Line	471.0	57.2	19.6	Boston, Mass.	Portland, Ore.	General	3,038	9,154

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Elg	23	17.25	24	6.25	24	14.05	24	14.05	24	14.05	Norwegian	O. S. Knutsen	357.4	51.2	24.0	Toopilla, Chile.	Azores	Nitrate of soda.	6,800	7,879
Wisconsin	23	21.30	24	6.37	24	13.40	25	12.30	25	12.30	French	French Line	470.3	61.2	26.4	Vancouver, B. C.	Antwerp, Belgium.	General	7,879	10,404
Sembarino	24	5.25	24	7.16	24	15.30	24	18.55	24	18.55	Dutch	Anglo-Saxon Pet. Co.	412.0	53.3	26.0	Los Angeles, Calif.	Lands End, Eng.	Kerosene	7,416	9,298
Cubore	24	1.20	24	9.20	24	17.40	24	21.10	24	21.10	American	Ore S. Corp.	450.6	57.2	23.0	Cruz Grande, Chile	Baltimore, Md.	Blast furnace ore	11,000	7,956
Dagran	24	10.20	24	11.21	24	18.00	24	18.00	24	18.00	Norwegian	J. P. Pedersen & Son.	381.9	45.0	27.0	Vancouver, B. C.	New York, N. Y.	Lumber	7,365	6,903
Rayville	24	12.00	24	13.35	24	20.25	25	2.15	25	2.15	American	Roosevelt S. Co., S. B.	401.9	54.2	26.0	Whysalia, Australia.	New York, N. Y.	General	6,784	7,097
Japan Arrow	24	15.00	24	15.42	24	23.05	24	23.05	24	23.05	American	Standard Transp. Co.	468.3	62.7	28.0	Los Angeles, Calif.	New York, N. Y.	Distillate fuel	12,181	10,084

9 Tug.

8 Launch.

7 Ferry boat.

1 Tanker.

10 Motor ship.

11 For orders.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Rochester			25	6.19	25	14.30	26	10.00	American	U. S. Navy	384.0	64.9		Balboa, C. Z.	Cristobal, C. Z.	Cruiser			
British Governor	24	19.00	25	6.45	25	15.05	25	15.05	British	British Tankers, Ltd.	440.0	57.0	26.0	Los Angeles, Calif.	Ellesmere Pt., Eng.	Gasoline	9,300	7,554	5,079
R. J. Hanna	25	5.25	25	7.13	25	15.55	25	15.55	American	Standard Oil Co. of Cal.	435.0	56.2	23.0	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline	9,071	7,639	5,135
Cauca	24	16.30	25	7.53	25	17.20	27	6.00	Colombian	National Navigation Co.	107.0	22.9	11.0	Buenaventura, Col.	Cristobal, C. Z.	(*)	226	238	163
Toyama Maru	24	16.30	25	10.19	25	18.15	25	23.40	Japanese	Nippon Yusen Kaisha	445.0	60.6	21.0	Hilo, P. I.	Boston, Mass.	General	5,002	7,799	5,484
Tai Yin	25	9.50	25	10.39	25	19.18	25	23.40	Norwegian	Barber S. Lines	461.4	60.6	24.0	Davao, P. I.	Boston, Mass.	General	6,083	9,997	7,063
Dalemonar	25	18.00	25	16.20	26	11.25	26	12.55	British	W. Runciman & Co.	399.9	52.9	26.0	Vancouver, B. C.	Rotterdam, Holl'd	Wheat	8,300	5,948	4,245
Yorkmar	25	15.00	25	19.05	26	11.20	26	11.20	American	Calmar S. S. Corp.	409.8	54.2	26.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	8,000	6,757	4,802
El Lobo	25	22.50	26	6.15	26	13.30	26	14.20	British	C. T. Bowring & Co.	385.2	51.0	24.3	La Libertad, Ecua	Philadelphia, Pa.	Crude oil	6,149	4,851	3,326
Buenos Aires	25	23.10	26	7.06	26	14.55	26	16.15	Swedish	Johnson Line	426.9	56.2	27.0	Honolulu, T. H.	Gothenburg, Swed.	General	7,762	7,591	5,661
Chicago	26	6.00	26	7.36	26	15.55	26	15.55	American	Amer-Hawaiian Line	407.7	53.7	24.0	Portland, Ore.	Boston, Mass.	General	5,504	7,103	4,991
Washington																			
Maru	26	8.45	26	9.43	26	19.10	26	20.35	Japanese	Kokusa Kisen Kaisha	385.0	51.0	26.0	Portland, Ore.	United Kingdom	Wheat	7,798	5,919	4,400
Kamboe	26	9.05	26	10.05	26	20.00	26	21.35	Belgian	Cha. Maritime de Belge	399.8	53.2	25.0	Vancouver, B. C.	Hull, England	Lumber, wheat	6,739	5,838	4,103
Denver			26	10.36	26	21.15			American	U. S. Navy	808.9	44.0		Balboa, C. Z.	Cristobal, C. Z.				
Pacific																			
Reliance	26	9.40	26	12.25	26	20.20	26	20.20	British	Furness, Withy & Co.	435.9	60.2	28.0	Vancouver, B. C.	Glasgow, Scotland	General	8,886	9,644	6,967
Walter A.																			
Luckenbach	26	14.40	26	15.40	26	22.10	26	22.10	American	Luckenbach Line	446.6	56.1	29.0	Portland, Ore.	Boston, Mass.	(*)	7,769	8,785	6,567
Steele	27	5.05	27	6.02	27	15.25	27	15.25	American	Ore S. S. Corp.	550.3	72.2	35.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	21,161	15,551	4,297
Los Alamos	27	2.45	27	6.58	27	15.30	27	17.40	American	Standard Oil Co. of N. J.	292.3	47.2	24.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	4,248	3,424	2,100
Pacific Cedar	26	23.55	27	7.13	27	16.55	27	20.10	American	Dixon S. S. Corp.	399.4	54.7	24.0	Seattle, Wash.	Norfolk, Va.	Lumber, general	7,350	6,138	4,353
Manhattan																			
Island	27	1.00	27	8.21	27	17.45	27	17.45	American	Redwood Line, Inc.	386.8	52.2	21.0	Portland, Ore.	New Orleans, La.	Lumber, general	4,559	5,606	4,125
Ecuador	26	14.30	27	11.09	27	19.11			American	Panama Mail S. S. Co.	380.6	48.7	21.0	San Francisco, Cal.	New York, N. Y.	General	2,410	5,926	4,178
Cerigo	27	10.00	27	11.44	27	19.20			German	Hamburg-American Line	227.0	34.4	13.0	Gusaquill, Ecuador	Cristobal, C. Z.	(*)	381	1,572	1,011
Margaret																			
Johnson	27	9.05	27	11.57	27	19.55	28	00.20	Swedish	Johnson Line	407.3	54.10	26.0	Vancouver, B. C.	Stockholm, Sweden	General	5,885	7,048	5,337
Unaga	24	9.45	28	6.20	28	13.55	28	16.20	American	Coast Guard Service	173.6	32.6	15.0	Juneau, Alaska	Baltimore, Md.		4,592	3,853	2,570
Noa, Prince	27	20.20	28	6.37	28	15.55	28	13.55	American	N. O. & S. S. Co.	324.0	46.2	22.0	Talcahuano, Chile	New Orleans, La.	Nitrate of soda	7,200	1,232	741
Manzales	28	6.40	28	7.54	28	15.10	30	8.55	German	Roland Line	216.5	32.9	14.0	Gusaquill, Ecuador	Cristobal, C. Z.	General	5,545	6,142	4,471
Masmar	28	10.50	28	11.40	28	18.15	28	18.15	American	Calmar S. S. Corp.	385.0	51.2	24.0	Portland, Ore.	Philadelphia, Pa.	Lumber and pulp			
Florence																			
Luckenbach	28	11.35	28	12.39	28	19.25	28	19.25	American	Luckenbach Line	401.8	52.2	24.0	Portland, Ore.	Mobile, Ala.	General	5,048	6,002	4,621
York City	28	11.45	28	12.56	28	20.30	28	23.05	British	Reardon Smith Line	415.9	55.0	28.0	N. Westster, B. C.	Manchester, Eng.	General	9,055	7,038	5,166
La Perla	28	14.00	29	6.24	29	13.40	30	7.10	American	United Fruit Co.	325.2	48.1	20.3	San Francisco, Cal.	Cristobal, C. Z.	General	4,73	4,033	2,261
Eastern Sun	29	3.00	29	6.37	29	14.45	29	14.45	American	Sun Oil Co.	480.6	66.0	29.0	Los Angeles, Calif.	Philadelphia, Pa.	General	13,331	9,607	6,551
El Cervo	28	18.25	29	7.40	29	15.10	29	15.10	British	C. T. Bowring & Co.	407.4	52.2	25.1	La Libertad, Ecua	Philadelphia, Pa.	Crude oil	7,901	6,046	4,326

* Lumber and canned goods. * Coffee, machine cylinder. * Cruiser. * Motor ship. * Tanker.

Cissy	28	23	00	29	8	10	29	16	10	29	18	00	Norwegian.	Isbrandtsen Moller Co.	280.5	44.2	20.0	Blain, Wash.	Tampico, Mexico.	Lumber	2,568	2,937	2,080
Acapula	29	5	10	29	8	24	29	16	00	29	16	00	British.	Pacific Steam Nav. Co.	215.7	33.5	13.0	Champerico, Guat.	Cristobal, C. Z.	(*)	3,363	7,373	7,706
Minnesota	29	4	15	29	8	44	29	16	20	29	16	20	American.	Amer.-Hawaiian Line.	407.7	53.7	25.0	Scott, Wash.	Boston, Mass.	General	6,107	7,150	5,024
Orduna	29	1	30	29	11	29	29	19	35	29	22	05	British.	Pacific Steam Nav. Co.	550.3	67.3	30.0	Tatehauo, Chile.	Liverpool, England	General	7,116	7,146	12,015
I. C. White	30	4	30	30	6	00	30	13	40	30	13	40	American.	Pan-Amer. Pac. & Tr. Co.	430.0	59.2	27.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline	10,800	7,686	5,563
Malmanger	27	17	50	30	6	44	30	14	45	30	14	45	Norwegian.	Anglo-Saxon Pet. Co.	425.0	57.0	18.3	Los Angeles, Calif.	Curacao, D. W. I.	Ballast	7,084	5,693	
Canadian	30	2	15	30	7	15	30	15	55	30	16	45	British.	Can. Nat. Steamships.	400.0	52.4	20.0	Brisbane, Australia	Montreal, Canada.	General	2,716	5,956	4,172
S-12	30	10	30	30	8	44	30	14	50	30	14	50	American.	U. S. Navy.	231.0	64.0	20.0	Balboa, C. Z.	Cristobal, C. Z.	Submarine	2,300	10,626	6,680
Santa Maria	30	12	05	30	16	46	31	13	20	31	13	20	Swedish.	Grace Line.	406.0	60.0	23.5	Valparaiso, Chile.	New York, N. Y.	(*)	21,654	15,424	4,421
Swanland	30	15	37	30	17	39	31	13	50	31	13	50	American.	Williams S. S. Corp.	415.1	55.1	23.4	Seattle, Wash.	Sparrows Pt., Md.	Iron ore	6,430	7,731	5,805
Willzipo	30	15	37	30	17	39	31	13	50	31	13	50	American.	Williams S. S. Corp.	415.1	55.1	23.4	Seattle, Wash.	Baltimore, Md.	General lumber	6,430	7,731	5,805

1 Tanker.

17 Coffee, wood, and hid.s.

18 Copper, lead, and cotton.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.												* DEPARTURES.											
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—																
August 24	Pastores	United Fruit Co.	Port Limon, Costa Rica.	August 24	No. 9664 19	Pan American Airways	Pan American Airways																
August 24	Gaucha	Hamburg-American Line	Tampico via waypoints.	August 24	No. 9137 19	United Fruit Co.	Pto. Caballo and wayp'ls.																
August 24	Ulua	United Fruit Co.	Puerto Colombia, Colon.	August 24	Pastores	Hamburg-American Line	New York via Habana.																
August 25	Cundinamarca-C-33 19	United Fruit Co.	Barraquilla, Colombia.	August 24	Gaucha	United Fruit Co.	Cartagena, Colombia.																
August 25	No. 9670 19	Pan American Airways	San Salvador and wayp'ls	August 24	Cartago	United Fruit Co.	Port Limon via Bocas.																
August 25	Eugenia D. 20	C. Davies	Colon, Rep. of Panama.	August 25	Castilla	United Fruit Co.	Port Limon via Bocas.																
August 25	Grunewald	Hamburg-American Line.	Hamburg via waypoints.	August 25	Eugenia D. 20	Pan American Airways	Bluefields, Nicaragua.																
August 25	No. 945-M 19	Pan American Airways	Talara via waypoints.	August 27	No. 9676 19	Pan American Airways	San Salvador and wayp'ls.																
August 25	Marstenen	Aluminum Line.	New Orleans and wayp'ls	August 27	Lautaro	Pacific Steam Navigation Co.	Miami via waypoints.																
August 27	Cristobal	Panama R. S. S. Line	New York via Haiti.	August 27	Grunewald	Hamburg-American Line.	Havre via waypoints.																
August 27	Tela	Elders & Fyffes Line.	Avonmouth via waypoints.	August 27	Ulua	United Fruit Co.	Tampico and waypoints.																
August 27	Pearl Marie 21	G. Bryan.	Colon, Rep. of Panama.	August 27	Ariguani	United Fruit Co.	Port Limon, Costa Rica.																
August 27	Inapaquina	A. Tagaropolis	Colon, Rep. of Panama.	August 27	Annetta I. 22	Aluminum Line.	Avonmouth via waypoints.																
August 27	Saxala	United Fruit Co.	Colon, Rep. of Panama.	August 27	Marstenen	A. Tagaropolis	Colon, Rep. of Panama.																
August 27	No. 9137 19	Merican	Liverpool via waypoints.	August 27	Pan Marie 21	Pan Marie 21	Georgetown and wayp'ls.																
August 27	No. 9664 19	Pan American Airways	Miami via waypoints.	August 28	No. 300-N 19	Pan American Airways	Bluefields, Nicaragua.																
August 27	Mary V. 21	E. Hawkins	San Salvador via wayp'ls.	August 28	No. 144-M 19	Pan American Airways	Talara via waypoints.																
August 28	Bolivar	Colombian S. S. Line	Colon, Rep. of Panama.	August 28	Sivaola	United Fruit Co.	Barraquilla, Colombia.																
August 28	Atlantida	Standard Fruit & S. S. Co.	New York via waypoints.	August 28	Merican	Leyland S. S. Line.	New York via Kingston.																
August 29	Castilla	United Fruit Co.	New Orleans via Habana.	August 28	Tela	United Fruit Co.	Tampa, Fla.																
August 30	No. 144-M 19	Pan American Airways	Puerto Caballo via wayp'ls	August 29	Cundinamarca-C-33 19	Scadia Airplane Co.	Cartagena & Pto. Colon.																
August 30	No. 142-M 19	Pan American Airways	Miami via waypoints	August 29	No. 9670 19	Pan American Airways	San Andres, Colombia.																
August 30	No. 9685 19	Pan American Airways	San Salvador and wayp'ls	August 30	Dorelian	Colombian S. S. Line	Barraquilla, Colombia.																
August 30	Parismina	United Fruit Co.	New Orleans and wayp'ls	August 30	Atlantida	Standard Fruit & S. S. Co.	San Salvador and wayp'ls.																
August 30	No. 300-N 19	Pan American Airways	Talara via waypoints.	August 30	Dora K. 23	A. L. Surgson.	New York via waypoints.																
August 30	Nueva Espana 22	Diez & Garcia	Colon, Rep. of Panama.	August 30			Santa Marta, Colombia.																
August 30			Colon, Rep. of Panama.	August 30			New Orleans and wayp'ls.																
August 30			Colon, Rep. of Panama.	August 30			Bluefields and Limon.																

19 Air mail carrier. 20 Schooner. 21 Motor schooner. 22 Motor boat. 23 Motor ship. (Continued on page 68, column 2.)

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors.

The rates are as follows:

(a) For handling cargo from ship's side to storage place, \$1 per ton of 2,000 pounds or 40 cubic feet on general merchandise, and one-half of the transfer rates provided by Item 34, Panama Canal Tariff No. 10, on other commodities.

(b) For handling cargo from storage place to ship's side, *i. e.*, for delivering or reforwarding it, the same rates as for receiving and storing, as per (a), above. The minimum charge for handling any shipment taken out of storage is \$1.

(c) For storage: First 35 days free; thereafter, 3 cents per day or fraction thereof per ton of 2,000 pounds or 1½ cents per day or fraction thereof per ton of 40 cubic feet.

Special rates on special commodities in large quantities may be obtained on request.

Various lines operating out of Cristobal and Balboa to the west coast of Central and South America will accept their proportion of the through rate for the haul beyond the Isthmus, as explained in the following paragraph:

By virtue of the Canal Zone for Orders arrangement shippers are enabled to consign cargo to the Isthmus and subsequently to reassign it to any port beyond the Isthmus to which there is a through rate from port of origin without sacrificing their right to the through freight rate. This means that when a shipment moves from, say, New York to the Canal Zone, usual local rates will be charged to Cristobal or Balboa, as the case may be; but should the owner wish to reforward to any other port to which there is a through rate from port of origin, he may do so upon payment of the receiving carrier's proportion of the through rate from port of origin to port of ultimate destination, and upon evidence that the shipment, or any part of it, has moved beyond the Isthmus, the initial carrier will refund the difference between its proportion of the through rate applicable and the local rate.

In addition to reassigning beyond the Isthmus, cargo billed Cristobal for Orders may be reassigned to Panama City or line points on the Panama Railroad on the basis of through rates from port of origin to Panama City. In this case the Panama Railroad Company's charges will be the difference between the rate charged to Cristobal by the ocean carrier and the through rate from port of origin to Panama City, and the necessary adjustments with the ocean carrier will be made by the Panama Railroad Company without inconvenience to shippers or consignees. The handling charge from storage place to cars is the same as from storage place to ship's side.

Cargo deposited in Hold for Orders Warehouse, Cristobal, which consignees desire transferred to Hold for Orders Warehouse, Balboa, will be assessed a charge of \$1 per ton on general cargo and one-half the transfer rates on other commodities for handling from the warehouse into cars at Cristobal, and a second charge of the same kind for handling from cars into warehouse at Balboa. The same charge will again apply when the cargo is reforwarded from, or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on Hold for Orders cargo discharged from vessels at Balboa.

Cargo consigned to Hold for Orders, Balboa, arriving at Cristobal piers, and/or cargo consigned to Hold for Orders, Cristobal, on which by previous arrangement the destination has been changed to Hold for Orders, Balboa, prior to arrival of the vessel, will be assessed one handling charge of \$1 per ton on general cargo or one-half of the transfer rates on other commodities for handling from shipside across piers and into cars at Cristobal and from cars into the Hold for Orders Warehouse, Balboa. The same charge will apply when the cargo is reforwarded from or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on cargo moving in the opposite direction.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," will be supplied on request to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective August 20, 1930.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb.	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, Diesel, at Cristobal only, in bulk, no surcharge.....	Bbl. of 42 gals.	1.80
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.13
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Location of Patients and Visiting Hours, at Gorgas Hospital.

The following table shows the distribution of patients in the Gorgas hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Visiting Hours.
Section "A:"	
Ward 2, Semi-private, white male.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 3, American male, eye, ear, nose and throat patients.....	Tuesdays, Thursdays and Saturdays, 2.30 to 4.30 p. m. 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 4, Private rooms.....	Daily, same as Ward 2 (above).
Section "B:"	
Ward 5, Male, private rooms, American boys.....	} Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 6, Foreign, male and female, private rooms, American girls.....	
Ward 7, White females, private rooms.....	
Ward 8, Obstetrical department, white females.....	
Nursery.....	No visitors permitted in nursery.
Section "C:"	
Ward 9, Colored, male.....	} Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 10, White foreign, male.....	
Ward 11, Colored, male (surgical).....	
Ward 12, Colored, male (medical).....	
Ward 13, Colored, male, G. U.....	
Ward 14, White, male, G. U.....	Tuesdays, Thursdays, Saturdays, Sundays, and holidays, 2.30 to 4.30 p. m.
Section "D:"	
Ward 15, American, male (surgical).....	} Tuesdays, Thursdays, Saturdays, Sundays and holidays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.
Ward 16, American, male (medical).....	
Ward 17, Colored children.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3.00 p. m.
Ward 18, White children.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 19, Colored, female (medical).....	} Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 20, Colored, female, surgical, obstetrical.....	
Isolation section.....	No visitors permitted except to visit tuberculosis patients Thursdays, Sundays and holidays, 1.30 to 3.00 p. m.

Permission to visit outside of visiting hours may be granted upon application to the Superintendent's Office. Immediate relatives of seriously ill patients will be admitted at any time by and in the discretion of the attending physician, section nurse, and in her absence, the nurse in charge.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.20 per barrel, Diesel oil \$1.80 per barrel, at Balboa and Cristobal.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$8 per ton of 2,240 pounds at Cristobal, and \$11 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide the means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective, in the course of handling large traffic through the Canal in over 15 years of operation.

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference.

It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will always save time by applying to the nearest American Consul.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 65.

PORT OF BALBOA.

* ARRIVALS.			* DEPARTURES.		
Date.	Vessel.	Line.	Date.	Vessel.	Line.
August 24	Frost ²⁴	West India Oil Co.	August 27	Frost ²⁴	West India Oil Co.
August 27	Dos Hermanos ²⁵	A. Valdez.	August 27	Dos Hermanos ²⁵	A. Valdez.
August 27	Guardian.	All America Cables	August 28	Guardian.	All America Cables
August 28	Sambu ²⁵	Hans Elliot.	August 29	Sambu ²⁵	Hans Elliot.
August 28	Salsgas ²⁵	S. A. Nanset.	August 31	Salsgas ²⁵	S. A. Nanset.
August 30	Real ²⁵	Hans Elliot.	August 30	Real ²⁵	Hans Elliot.
			August 31	City of Panama ²⁴ .	Panama Mail S. S. Co.

* Other than ships passing through the Canal.

²⁵ Motor schooner.

²⁴ Motor ship.

¹ Tanker.

Talara, Peru.
Panama Bay, R. P.
La Libertad, Ecuador.
Panama Bay, R. P.
Los Angeles, Calif.
Panama Bay, R. P.
Corinto, Nicaragua.

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Comparison of Canal Traffic in August, 1930, with August Traffic in Previous Years.

The traffic through the Panama Canal during the month of August, 1930, showed a decrease as compared with the preceding month, and a large decrease as compared with August, 1929.

The 465 transits in August this year are fewer by 76, or 14.0 per cent, than the 541 transits in the corresponding month a year ago, while the net tonnage, Panama Canal measurement, aggregating 2,345,573 tons, is less by 213,166 tons, or 8.3 per cent, than the total of 2,558,739 tons in August, 1929. The cargo tonnage of 2,148,469 tons for August, 1930, shows a decline of 532,261 tons, or 19.9 per cent, from the total of 2,680,730 tons passing through the Canal in August, 1929.

In the tabulation below are shown the number of transits, net tonnage, Panama Canal measurement, and the tons of cargo carried through the Canal during the month of August each year from 1914 to 1930, inclusive, and for comparison, the monthly averages for the corresponding fiscal year ending on June 30th following:

Calendar year.	Month of August.			Fiscal year.	Average per month for fiscal year.		
	Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.		Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.
1914.....	24	89,894	110,884	1915.....	102	361,197	465,567
1915.....	155	492,752	571,475	1916.....	63	199,687	257,843
1916.....	137	443,415	505,673	1917.....	150	483,213	589,213
1917.....	170	511,648	579,340	1918.....	172	547,839	627,669
1918.....	158	452,005	533,703	1919.....	169	510,416	576,385
1919.....	188	586,111	715,724	1920.....	206	712,170	781,208
1920.....	266	951,345	1,040,740	1921.....	241	951,323	966,691
1921.....	236	965,276	839,273	1922.....	228	851,455	907,075
1922.....	257	1,084,133	1,165,950	1923.....	331	1,550,482	1,630,656
1923.....	454	2,232,590	2,168,750	1924.....	436	2,179,073	2,249,559
1924.....	372	1,901,895	1,958,479	1925.....	389	1,904,596	1,996,570
1925.....	372	1,779,627	1,912,217	1926.....	433	2,064,549	2,169,787
1926.....	464	2,230,905	2,321,697	1927.....	456	2,185,651	2,312,351
1927.....	543	2,513,614	2,429,947	1928.....	538	2,454,886	2,469,226
1928.....	526	2,437,246	2,425,336	1929.....	534	2,468,493	2,555,250
1929.....	541	2,558,739	2,680,730	1930.....	515	2,498,385	2,502,519
1930.....	465	2,345,573	2,148,469	.....	³ 492	³ 2,439,647	³ 2,370,483

¹ Canal opened August 15, 1914.

² Average for 10½ months of fiscal year ended June 30, 1915.

³ First 8 months of calendar year 1930.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 6, 1930.

No. 752.

Ecuador, La Plata Island light, reported extinguished. The master of the S. S. *Rhodopis* reports that on August 31, 1930, La Plata Island light was extinguished.

Approximate position, Lat. 1° 15' 50" S., Long. 81° 06' 00" W.

(See Notice to Mariners No. 736, August 19, 1930.)

J. L. SCHLEY,
Acting Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, September 6, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Canadian																			
Planter.....	30	18.55	31	6.10	31	12.58	31	14.00	British.....	Can. Nat. Steamships.	400.0	52.0	15.6	Montreal, Canada.	Vancouver, B. C.	General.....	1,200	5,858	4,108
Cergo.....	27	12.20	31	9.00	31	16.16	31	18.00	German.....	North German Lloyd.	227.0	34.0	13.6	Cristobal, C. Z.	Kayaquil, Ecuador	General.....	96	1,572	1,011
Santa Enlaha.....	31	7.35	31	9.00	31	16.13	31	21.05	American.....	North, Lilly & Co.	251.0	43.6	23.0	Baltimore, Md.	Kahului, Hawaii.	General.....	3,044	2,823	1,730
Natchew																			
Luckenbach.....	31	9.25	31	9.40	31	16.51	31	18.00	American.....	Luckenbach Line.	434.0	57.0	22.8	Houston, Texas.	Tacoma, Wash.	General.....	4,039	7,977	5,764
Peter Kerr.....	30	20.40	31	10.20	31	17.42	31	18.50	American.....	Quaker Line.	415.0	55.6	24.6	Philadelphia, Pa.	Vancouver, B. C.	General.....	7,666	7,704	5,696
Amasis.....	31	6.35	31	12.25	31	19.13	1	1.14	German.....	Hamburg-American Line	438.0	55.0	22.6	Hambrug, Germany	Valparaiso, Chile.	General.....	4,048	7,286	5,174
New Jersey 1.....	31	16.50	31	17.10	1	9.29	1	10.54	American.....	The Texas Co.	416.8	56.1	19.0	New York, N. Y.	Los Angeles, Calif.	Ballast.....	.....	6,925	5,014
Sir Osborn																			
Holmden 1 2.....	31	15.55	1	6.10	1	12.50	1	16.30	Norwegian.....	Anglo-Saxon Pet. Co.	471.0	64.4	18.0	Baltimore, Md.	Los Angeles, Calif.	Ballast.....	.....	9,582	6,604
Sir James Clark																			
Rees 2.....	31	16.43	1	7.15	1	14.10	1	18.00	Norwegian.....	Rasmussen & Konov.	537.6	74.3	18.0	Sandefjord, Norway	Los Angeles, Calif.	Ballast.....	.....	16,364	11,700
Robin Adair.....	1	10.35	1	10.45	1	17.35	1	19.00	American.....	Isthmian S. Lines	434.8	65.2	22.3	Baltimore, Md.	Tacoma, Wash.	Steel, general.....	5,932	7,470	5,529
Hartford.....	1	11.05	1	11.20	1	18.50	1	23.50	British.....	Federal Steam Nav. Co.	520.0	64.0	30.0	Avonmouth, Eng.	N. Plymouth, N. Z.	General.....	9,973	12,033	8,991
Antiope.....	1	13.47	1	17.23	2	9.02	2	10.24	British.....	Andrew Ayr & Co.	401.0	54.2	25.4	Barry, England	Auckland, N. Z.	Phosphate.....	7,462	6,229	4,612
No. 31076 3.....	1	.....	1	.....	1	19.24	.....	.....	American.....	United Fruit Co.	.....	.....	.....	Cristobal, C. Z.	Gatun, C. Z.	Ballast.....	.....	15	.....
Gertrude																			
Kellogg 1.....	1	18.45	2	6.05	2	15.30	2	16.35	American.....	Kellogg S. S. Corp.	391.9	51.2	23.0	Montreal, Canada.	Los Angeles, Calif.	Ballast.....	.....	5,393	3,719
Svalder 1 2.....	1	20.15	2	6.05	2	16.16	2	17.20	Norwegian.....	Pet. Stor. & Fin. Corp.	403.3	55.3	19.8	Liverpool, England	Los Angeles, Calif.	Ballast.....	.....	6,466	4,336
Tiger 1.....	2	2.25	2	7.15	2	15.57	2	16.45	American.....	Standard Transp. Co.	410.0	56.0	19.0	New York, N. Y.	Los Angeles, Calif.	Ballast.....	.....	8,201	6,207
Willpole.....	2	2.35	2	7.30	2	16.44	2	17.55	American.....	Williams Line.	386.8	52.2	17.3	Charleston, S. C.	Seattle, Wash.	General.....	1,839	5,680	4,080
Oak Branch.....	1	22.20	2	8.15	2	17.30	2	18.35	British.....	F. & W. Ritson.	385.0	50.0	21.6	North Shields, Eng.	Valparaiso, Chile.	General.....	3,650	5,209	4,035
Point Montara.....	2	7.45	2	8.45	2	18.23	2	19.45	American.....	Swayne & Hoyt.	324.0	46.2	21.0	Tampa, Fla.	Vancouver, B. C.	General.....	2,685	3,984	2,612
S-11 4.....	.....	.....	2	9.40	2	18.25	.....	.....	American.....	U. S. Navy.	231.0	21.0	.....	Cristobal, C. Z.	Balboa, C. Z.	Ballast.....	.....	.....	.....
S-12 4.....	.....	.....	2	9.50	2	18.25	.....	.....	American.....	U. S. Navy.	231.0	21.0	.....	Cristobal, C. Z.	Balboa, C. Z.	Ballast.....	.....	.....	.....
S-20.....	.....	.....	2	9.50	2	18.25	.....	.....	American.....	U. S. Navy.	231.0	21.0	.....	Cristobal, C. Z.	Balboa, C. Z.	Ballast.....	.....	.....	.....
City of Elwood.....	2	9.10	2	10.40	2	19.05	2	20.55	American.....	Roosevelt S. S. Co., S. B.	395.6	55.0	24.0	Newport News, Va.	Shanghai, China.	General.....	5,836	7,344	5,283
Denver 2.....	26	21.15	2	10.40	2	19.25	2	20.40	American.....	U. S. Navy.	232.0	44.0	18.6	Cristobal, C. Z.	Balboa, C. Z.	Ballast.....	.....	.....	.....
Pacific																			
Redwood.....	2	11.45	2	12.00	2	19.55	2	21.10	American.....	Dimon S. S. Line.	409.6	54.2	17.0	Philadelphia, Pa.	Tacoma, Wash.	General.....	3,759	6,537	4,845
Mandinga 6.....	2	19.30	2	19.45	2	8.06	.....	.....	American.....	Stand. Fruit & S. S. Co.	404.0	53.0	16.0	Cristobal, C. Z.	Gatun, C. Z.	Ballast.....	.....	8	.....
Hawaiian.....	2	19.30	2	19.45	2	8.06	.....	.....	American.....	Royal-Hawaiian Line	404.0	53.0	16.0	Boston, Mass.	Seattle, Wash.	General.....	1,890	6,766	4,767
Boskoop.....	2	10.05	3	6.10	3	13.41	3	21.35	Dutch.....	Amer-Neth. S. S. Co.	400.0	58.0	20.0	Hamburg, Germany	Corral, Chile.	General.....	2,351	7,817	6,097
Saota 7.....	.....	.....	3	6.25	3	14.32	.....	.....	American.....	U. S. Navy.	149.3	30.0	.....	Cristobal, C. Z.	Towing barge.	.....	.....	.....	.....
Lumen 1 2.....	3	5.55	3	7.20	3	15.35	3	18.40	British.....	Anglo-Saxon Pet. Co.	425.0	54.0	23.0	Liverpool, England	Los Angeles, Calif.	Ballast.....	.....	6,645	4,843
Robert																			
Luckenbach.....	3	9.05	3	9.30	3	16.20	3	17.30	American.....	Luckenbach Line.	445.0	58.0	21.0	Boston, Mass.	Portland, Oreg.	General.....	4,613	8,695	6,375

7 Tug.

6 Launch.

5 Cruiser.

4 Submarine.

3 Barge.

2 Motor ship.

1 Tanker.

Velma * 2	3	6 30	3	17 14	3	18 18	Norwegian.	Chile S. S. Co.	107.5	84.2	21.0	Los Angeles, Calif.	Ballast.	300	238	163
Gen. Vm. M.	1	17 33	3	18 48	3	20 10	Colombian.	National Navigation Co.	475.6	22.9	10.3	Buenaventura, Col.	General, platings.			
Graham 9	3	7 30	3	15 32	3	15 32	American.	U. S. Army.	156.0	32.0		Balboa, C. Z.	Ballast.			
Santa Clara.	3	6 45	3	12 25	3	18 44	American.	Grace Line.	483.3	63.9	25.0	Valparaiso, Chile	General.	2,671	11,680	7,442
Argon Maru.	3	13 45	3	21 10	3	4 7 30	Japanese.	Otsuka Shosen Kaisha.	413.0	53.5	25.0	Shanghai, China.	Gen., phosphate	6,428	7,273	5,294
Echo 6	3	13 45	3	14 58	3	14 58	American.	H. W. Post.	407.2	32.2	20.0	Balboa, C. Z.	Ballast.	6,156	6,412	6
San Quirino 2	3	21 50	4	6 05	4	16 15	British.	Shell Oil Co.	434.0	56.2	22.0	Los Angeles, Calif.	Ballast.	7,344	5,099	
Huguenot 2	4	8 17	4	8 30	4	15 18	American.	Richfield Oil Co.	434.0	62.0	19.0	Los Angeles, Calif.	Ballast.	430	11,060	8,076
Amerika 2	4	7 30	4	10 10	4	16 55	Danish.	East Asiatic Co.	405.0	51.6	21.0	Vancouver, B. C.	General.	3,645	5,349	2,950
Herman Frisch.	4	11 05	4	11 15	4	18 56	American.	Texas Gulf Sulphur Co.	355.0	51.6	21.0	Tacoma, Wash.	Sulphur	2,495	13,137	9,067
Oroya.	4	16 10	5	6 15	5	13 30	British.	Pacific Steam Nav. Co.	525.3	63.0	25.0	Talcahuano, Chile.	General.	5,798	5,852	4,112
Hendonhall.	4	21 55	5	14 34	5	16 20	British.	Inter-Freighting Co.	400.0	53.0	24.6	San Antonio, Chile.	General.			
President																
Fillmore.	5	4 55	5	15 07	5	21 40	American.	Dollar Line.	600.0	65.3	28.0	San Francisco, Cal.	General.	4,120	17,054	11,542
California.	5	5 55	5	16 08	5	1 45	American.	Panama-Pacific Line.	573.4	80.3	27.0	San Francisco, Cal.	General.	3,205	24,506	17,565
Arana.	4	21 30	5	11 55	5	20 18	British.	Pacific Steam Nav. Co.	303.0	43.0	17.5	Callao, Peru.	General.	1,732	2,851	1,776
Hercia.	5	11 45	5	19 32	5	21 30	American.	Norton, Lilly & Co.	440.0	56.0	21.3	Portland, Oreg.	Steel.	5,514	8,353	6,113
Nelson	5	12 30	5	20 52	5	21 58	American.	Nelson Line.	380.3	53.1	18.6	Tacoma, Wash.	General.	4,006	5,657	4,133
Traveler.	5	16 15	5	9 02	5	10 35	American.	Son Oil Co.	480.6	66.0	23.5	Los Angeles, Calif.	Ballast.	9,607	6,548	
Chester Sun 2	29	13 00	6	10 10	6	13 19	British.	Pacific Steam Nav. Co.	215.7	33.3	16.0	Champerico, Guatemala	General.	793	1,273	706
Acapulca.	6	6 10	6	10 00	6	17 30	British.	Alfred Holt & Co.	458.0	58.2	21.6	Dairen, China.	General.	5,934		
Tandals.	5	13 40	6	10 20	6	17 02	Dutch.	Holland-American Line.	485.5	63.2	20.3	Portland, Oreg.	General.	2,401	10,736	7,551
Dinedijk 2.	5	10 15	6	11 10	6	18 04	Dutch.	Holland-American Line.	471.0	60.0	18.8	Portland, Oreg.	General.	1,881	9,165	7,056
Moerdijk.	5	10 15	6	11 10	6	18 04	Dutch.	Holland-American Line.	471.0	60.0	18.8	Vancouver, B. C.	General.	1,881	9,165	7,056
Neudana.	6	19 50	6	20 20	7	9 00	American.	Amer-Hawaiian Line.	460.0	53.0	19.3	Portland, Oreg.	General.	2,066	6,823	4,627

* Mine planter.

† Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Vistula * 9.	30	18 44	31	6 25	31	14 30	Danzig.	Standard Oil Co., N. Y.	498.8	64.1	27.6	Talara, Peru.	Crude oil.	12,000	10,604	8,167
Hoyanger 9.	31	20 45	1	6 19	1	13 45	Norwegian.	Westfal, Larsen & Co.	281.6	53.8	25.0	Tocopilla, Chile	Nitrates.	8,270	6,289	4,723
Caldas 9.	31	20 45	1	6 52	1	15 12	Colombian.	Com. Nav. de Navig.	116.0	21.1	9.6	Buenaventura, Col.	General.	98	211	124
Tashino.	31	22 30	1	6 53	1	15 00	American.	Charles Nelson & Co.	324.0	42.6	22.0	Seattle, Wash.	Lumber, general	4,253	9,884	2,628
Virginia.	1	5 30	1	7 17	1	15 30	American.	Kokuai Kisen Kaisha.	385.0	58.2	28.0	Baltimore, Md.	Lumber, general	8,200	10,491	7,400
Toku Maru.	1	6 45	1	7 25	1	18 00	Japanese.	Kokuai Kisen Kaisha.	391.5	51.0	27.6	Boston, Mass.	Wheat.	7,700	5,919	4,001
Likeroo * 9.	1	7 15	1	8 50	1	18 23	Polish.	Anglo-Saxon Pet. Co.	304.4	51.7	27.0	United Kingdom	Gasoline.	7,292	6,535	4,320
Carca 9.	1	10 45	1	11 20	1	17 53	Colombian.	Com. Nav. de Navig.	107.4	22.9	8.0	Caracao, D. W. I.	Ballast.	2,630	5,967	4,323
Santa Elisa.	1	13 11	1	14 25	1	20 45	German.	Grace Line.	300.3	51.7	23.0	Christobal, C. Z.	General.	10,359	10,002	6,743
Schwaben.	1	16 30	1	17 35	2	11 30	German.	North German Lloyd.	491.4	63.8	26.0	Bremen, Germany	General.	8,590	20,773	12,167
Virginia.	1	11 32	2	6 17	2	13 35	American.	Panama-Pacific Line.	586.4	80.3	29.0	San Francisco, Cal.	General.	7,632	4,382	4,535
Evnia * 9.	1	22 20	2	7 20	2	14 40	Norwegian.	Anglo-Mexican Pet. Co.	391.2	55.1	25.0	New York, N. Y.	Natural gasoline.	16,836	11,628	7,221
Australia 1 9.	2	6 00	2	7 55	2	16 45	American.	The Texas Co.	509.7	70.3	31.0	Los Angeles, Calif.	Gasoline.			
Herman F.								Union Sulphur Co.	409.8	54.2	24.0	Longview, Wash.	Lumber.	7,000	5,557	3,430
Whitton.	2	3 00	2	8 05	2	15 50	American.	Union Sulphur Co.	409.8	54.2	24.0	Providence, R. I.	Lumber, general.	10,300	8,536	5,369
Dorothy	2	7 45	2	8 50	2	17 05	American.	Luckenbach Line.	448.9	60.2	32.0	Boston, Mass.	Lumber, general.	8,000	7,583	4,819
Luckenbach.	2	9 10	2	9 10	3	6 25	American.	U. S. Navy.	450.0	30.0		Christobal, C. Z.	Lumber.			
Sciota 10.	2	9 30	2	10 24	2	17 55	American.	Pomona S. S. Co.	440.0	56.0	26.0	Baltimore, Md.	Lumber.			
Pomona.	2	9 30	2	10 24	2	17 55	American.	Pomona S. S. Co.	440.0	56.0	26.0	Baltimore, Md.	Lumber.			

** For orders.

10 Tug.

9 Motor ship.

† Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.	Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.									Tons.	Net.
Canadian Challenger	2	11 15	2	12 05	2	18 43	2	22 55	British	Can. Nat. Steamships	400.0	52.0	13.0	Auckland, N. Z.	Montreal	General	1,030	5,439
Gregalia	2	15 00	2	15 31	2	22 25	3	6 30	British	Donaldson Bros., Ltd	425.0	56.0	30.6	Victoria, B. C.	Glasgow, Scotland	General	7,870	7,827
Comander McCauley	3	3 43	3	6 05	3	13 35	3	13 35	American	U. S. Navy	416.8	59.1	25.0	Balboa, C. Z.	Catan Lake, C. Z.	Natural gasoline	7,561	6,945
Illinois	2	23 00	3	0 34	3	13 05	3	13 05	Danzig	W. Texaschiff Rhedever	470.0	63.2	27.0	Talara, Peru	Hamburg, Germany	Naphtha	11,300	9,248
Thomas H. Wheeler	2	23 40	3	7 20	3	17 15	3	17 15	American	Standard Shipping Co.	495.0	57.2	28.0	Long Beach, Calif.	New York, N. Y.	Gasoline	9,206	7,481
Aconagua	3	23 00	3	8 63	3	17 10	3	19 05	Chilean	Ch. Sud. Amer. de Vap.	432.8	56.2	27.0	Valparaiso, Chile	New York, N. Y.	General	2,235	7,791
Rhodes	3	6 22	3	0 13	3	12 30	3	21 15	German	Hamburg-American Line	435.5	53.2	25.0	Valparaiso, Chile	Hamburg, Germany	General	7,073	7,523
Port Reyes	3	2 45	3	0 21	3	18 30	3	18 30	American	Swayze & Hoyt	324.0	48.2	23.0	Portland, Oreg.	New Orleans, La.	General	3,475	3,984
Arcadia	2	4 00	3	9 21	3	18 15	3	18 15	American	Mrs. H. R. Hardwick	174.2	27.0	10.3	Los Angeles, Calif.	Boston, Mass.	Ballast	3,991	263
Sibian	3	2 30	3	0 30	3	19 30	3	20 30	British	Canadian Transp. Co.	423.0	56.0	25.0	Vancouver, B. C.	Avonmouth, Eng.	Lumber, general	8,300	6,267
Prince	3	5 10	3	10 05	3	19 50	3	0 40	American	Hamburg-American Line	227.5	34.4	13.1	Quayquil, Ecuador	Crystol, C.	General	369	633
Durazo	3	6 11	3	10 47	3	20 10	3	20 10	German	States S. S. Co.	415.1	53.7	25.0	N. Westin ster, B. C.	Philadelphia, Pa.	Lumber, general	4,818	7,643
San Luis	3	5 00	3	11 09	3	21 18	4	1 55	American	Standard Oil Co. of Cal.	500.0	63.2	29.0	Estero Bay, Calif.	Wilhelmshaven, Ger	(-)	13,641	11,223
George	3	6 20	3	12 02	3	21 40	4	1 10	Norwegian	Fred Olsen & Co.	425.5	55.3	26.0	Vancouver, B. C.	Hull, England	Wheat, general	8,191	7,553
Washington	3	8 45	3	13 07	3	22 05	3	22 05	American	Sun Oil Co.	480.0	60.0	29.0	Los Angeles, Calif.	Chester, Pa.	Gasoline	13,621	9,919
Smoll	3	8 45	3	13 07	3	22 05	3	22 05	American	Sun Oil Co.	480.0	60.0	29.0	Los Angeles, Calif.	Chester, Pa.	Gasoline	13,621	9,919
Ville de Strasbourg	3	15 00	3	16 07	3	23 25	4	3 20	French	Messageries Maritimes	409.3	53.5	20.0	Noumea, New Cal.	Marseilles, France	General	2,645	7,677
Miguel de Larrinaga	3	18 10	3	19 05	3	16 10	4	12 40	British	Larrinaga & Co., Ltd.	338.4	53.0	24.5	Tucumilla, Chile	Jacksonville, Fla.	Nitrates	7,490	5,274
Marce	3	23 00	4	6 05	4	16 15	4	16 15	American	Ore S. Corp.	550.3	73.2	34.3	Cruz Grande, Chile	Baltimore, Md.	Iron ore	21,634	15,551
Bennetom	4	5 30	4	6 49	4	17 20	5	12 15	Dutch	Royal Ned. S. Co.	450.0	53.0	25.0	Corral, Chile	Hamburg, Germany	General	8,066	7,849
Chr. Knudsen	4	6 00	4	7 24	4	16 20	4	15 20	Norwegian	Canadian Transp. Co.	381.2	54.7	25.2	Vancouver, B. C.	Dover, England	Lumber, general	6,800	6,083
Sire Island	2	8 30	4	10 47	4	17 20	4	17 20	American	Dept. of Commerce	108.0	30.0	13.0	Portland, Oreg.	New York, N. Y.	Light ship	3,640	7,330
Fine Pedro	4	10 30	4	11 11	4	18 20	4	18 20	American	Quicks of Line	305.5	55.0	21.5	Vancouver, B. C.	Philadelphia, Pa.	General	3,640	7,330
Rotoma	4	13 20	4	13 57	4	20 38	5	10 25	British	N. Z. Shipping Co.	525.0	61.4	24.0	Auckland, N. Z.	London, England	Frozen, general	4,805	12,846
California	4	17 00	5	6 03	5	14 40	5	14 40	American	Standard Oil Co. of Cal.	513.5	68.2	30.0	Los Angeles, Calif.	London, England	Gasoline	15,331	11,719
Cressington	4	20 30	5	6 42	5	15 55	5	15 55	British	Boston Line	404.0	55.0	25.0	Vancouver, B. C.	Hull, England	General	8,400	7,075
Court	5	3 31	5	7 41	5	17 05	5	17 05	American	Amer-Hawaiian Line	494.6	53.9	24.0	Seattle, Wash.	Boston, Mass.	General	5,224	6,777
Iowa	5	8 05	5	8 50	5	17 55	6	23 09	French	French Line	473.0	51.7	27.0	Corral, Chile	Haute, France	General	8,290	7,469
Vanduzee	5	10 00	5	10 46	5	18 15	5	18 15	British	Gos Harrison & Co.	375.0	51.7	24.0	Los Angeles, Calif.	Haute, France	Benzine	6,290	5,987
Helen Whittier	5	11 15	5	12 16	5	20 10	5	20 10	American	Christenson S. S. Co.	409.6	54.2	24.9	Willapa Har., Wash.	New York, N. Y.	Lumber	7,250	6,667

13 Kettleman crude oil.

14 Yacht.

15 Motor ship.

16 Launch.

17 Tanker.

Commercial Traffic Through the Panama Canal in August, 1930, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of August, 1930, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for August, 1929 and 1928. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States	77	426,673	325,907	526,209	325,991	\$361,612.16	191,501
East coast of United States to west coast of South America:							
British	3	12,375	9,776	16,799	10,342	10,700.97	5,023
Chilean	2	9,377	6,899	14,620	7,952	8,623.75	3,206
Danish	1	4,558	2,734	4,553	2,785	3,417.50	2,268
Swedish	2	8,917	7,486	30,676	8,762	6,420.24	.....
United States	12	56,059	43,041	76,520	42,959	44,092.33	16,059
Total	20	91,286	69,936	143,168	72,800	73,254.79	26,556
Europe to west coast of United States:							
British	4	24,703	20,466	32,696	20,029	21,597.78	15,519
Danish	1	4,097	3,355	5,752	3,406	2,949.84	.....
French	1	6,997	6,693	9,117	6,732	5,019.75	.....
German	2	12,038	9,412	15,396	9,295	10,157.30	2,925
Norwegian	5	26,056	20,441	33,802	20,047	18,612.27	8,284
Panamanian	1	6,650	5,650	8,947	5,651	4,788.00	.....
Swedish	2	10,655	6,559	10,847	8,271	7,975.34	7,094
United States	2	16,532	13,093	21,083	12,961	11,903.04	.....
Total	18	107,638	85,669	137,640	86,392	83,003.32	33,822
Europe to west coast of Canada:							
Belgian	1	4,976	4,568	7,138	3,988	5,710.00	5,200
British	6	29,102	18,177	29,808	18,138	22,718.35	12,755
Danish	2	10,655	8,442	13,297	8,490	10,552.50	8,945
Dutch	2	13,679	10,642	16,989	10,604	13,302.50	4,957
French	2	14,538	8,464	15,989	9,073	10,580.00	3,415
German	2	13,648	8,619	15,048	9,070	10,773.75	8,735
Italian	1	6,025	5,056	7,098	4,498	6,320.00	2,910
Norwegian	1	6,140	5,261	8,518	5,341	6,576.25	2,576
Swedish	1	4,860	2,781	4,960	3,665	3,476.25	2,318
Total	18	103,623	72,010	118,845	72,867	90,009.60	51,811
Europe to west coast of South America:							
British	3	19,151	14,144	24,124	14,919	17,680.00	12,211
Danzig	1	6,310	5,346	8,940	5,050	4,543.20	.....
Dutch	2	9,640	5,431	9,243	5,630	6,783.75	7,931
French	1	4,854	3,224	5,399	3,225	4,030.00	3,678
German	5	24,612	19,221	30,781	18,988	24,026.25	19,605
Italian	2	16,845	10,690	23,721	12,808	13,362.50	3,034
Norwegian	2	8,442	5,785	10,009	5,781	5,945.07	7,327
Total	16	89,854	63,841	112,217	66,401	76,375.77	53,786
East coast of United States to Far East:							
British	6	36,209	21,245	35,481	21,119	26,556.25	25,583
Japanese	3	14,313	13,097	18,683	12,800	16,119.10	18,844
Norwegian	2	11,315	6,455	11,048	6,556	8,068.75	10,274
United States	4	23,988	17,321	27,808	17,297	21,651.25	32,338
Total	15	86,025	58,118	93,020	57,772	72,395.35	87,039
East coast of United States to Australasia:							
British	7	42,200	29,762	47,377	30,033	37,202.50	21,866
Norwegian	3	14,173	7,876	13,420	7,845	9,845.00	21,865
United States	2	8,061	5,943	9,603	5,937	7,428.75	12,645
Total	12	64,434	43,581	70,410	43,815	54,476.25	56,376

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Europe to Australasia:							
British.....	7	58,757	42,286	69,747	43,141	\$52,857.50	38,377
French.....	1	5,364	4,237	7,139	4,335	5,358.75	1,484
Norwegian.....	2	20,285	16,007	27,317	16,465	16,317.97	.....
Swedish.....	1	6,190	3,278	5,841	4,083	4,097.50	4,479
Total.....	11	90,596	65,858	110,044	68,024	78,631.72	44,340
Cristobal to west coast of South America:							
Colombian.....	2	326	328	466	332	391.20	451
Dutch.....	2	1,484	588	1,560	646	735.00	204
German.....	7	5,941	4,003	7,541	4,112	5,003.75	1,424
Total.....	11	7,751	4,919	9,567	5,090	6,129.95	2,079
East coast of United States to Philippine Islands:							
British.....	3	18,952	12,263	21,390	12,283	15,328.75	13,972
Norwegian.....	1	3,735	2,075	3,549	2,098	2,593.75	5,400
United States.....	1	6,183	5,780	7,717	5,791	7,225.00	8,698
Total.....	5	28,870	20,118	32,656	20,172	25,147.50	28,070
Foreign vessels in ballast—United States inter-coastal:							
British.....	3	13,750	12,039	21,754	12,926	9,909.09	.....
Norwegian.....	1	4,722	2,728	4,624	2,765	3,399.84	.....
Total.....	4	18,472	14,767	26,378	15,691	13,308.93	.....
Cristobal to west coast of United States:							
United States.....	4	8,310	7,437	11,290	7,332	8,189.75	1,755
East coast of South America to west coast of United States:							
Norwegian.....	1	5,246	2,949	4,883	2,999	3,686.25	5,319
United States.....	2	10,039	7,594	11,994	7,540	7,998.98	5,476
Total.....	3	15,285	10,543	16,877	10,539	11,685.23	10,795
Cristobal to west coast of Central America:							
British.....	3	3,028	2,568	4,831	2,715	3,210.00	2,107
East coast of United States to west coast of Canada:							
United States.....	2	11,261	9,230	13,277	9,214	11,304.45	12,159
East coast of United States to Hawaii:							
United States.....	2	3,470	3,070	5,294	3,084	3,837.50	6,307
Around the world:							
United States.....	2	20,565	15,731	26,048	15,731	19,663.75	7,302
Canadian intercoastal:							
British.....	2	8,290	6,563	11,156	6,887	8,203.75	3,200
East coast of Canada to west coast of South America:							
British.....	2	12,766	10,909	19,144	10,994	9,191.52	.....
East coast of Canada to Australasia:							
British.....	2	8,695	6,571	10,950	6,694	8,213.75	6,182
East coast of Central America to west coast of South America:							
British.....	1	3,892	3,363	5,582	3,370	4,203.75	7,619
Colombian.....	1	124	113	207	109	141.25	245
Total.....	2	4,016	3,476	5,789	3,479	4,345.00	7,864
West Indies to west coast of Canada:							
British.....	2	8,909	6,708	10,539	6,751	8,385.00	11,014
Europe to west coast of Central America:							
German.....	1	2,967	1,832	3,034	1,786	2,290.00	1,697
Panamanian.....	1	101	103	203	101	121.20	150
Total.....	2	3,068	1,935	3,237	1,887	2,411.20	1,847

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of South America to Far East:							
Japanese	2	13,452	9,617	16,893	10,241	\$12,021.25	7,313
East coast of Canada to west coast of United States:							
British	1	5,185	3,007	4,867	2,991	3,758.75	4,000
East coast of Central America to Australasia:							
Norwegian	1	4,534	2,465	4,114	2,453	3,081.25	7,001
South American intercoastal:							
Norwegian	1	1,189	1,061	1,657	944	856.08	
Cristobal to Balboa:							
Panamanian	1	59	54	94	54	67.50	48
West Indies to Balboa:							
United States	1	2,235	1,906	2,991	1,739	2,382.50	2,927
West Indies to west coast of South America:							
British	1	3,326	2,872	4,800	2,949	3,590.00	4,506
Africa to Far East:							
British	1	5,406	2,901	4,745	2,877	3,626.25	7,700
Grand total, August, 1930	244	1,258,181	933,348	1,558,747	944,570	1,062,369.82	679,407
Grand total, August, 1929	267	1,307,072	971,968	1,607,157	975,948	1,119,659.40	858,661
Grand total, August, 1928	271	1,264,859	960,408	1,586,980	967,722	1,084,905.51	752,508

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States	73	393,739	300,519	486,887	300,600	\$375,648.75	520,184
West coast of South America east coast of United States:							
British	7	29,310	22,836	38,390	23,463	28,545.00	42,869
Chilean	1	4,672	3,433	7,310	3,976	4,291.25	1,839
Danzig	1	8,167	5,485	8,952	5,096	6,856.25	13,000
Swedish	1	4,421	3,743	15,339	4,377	4,678.75	21,654
United States	16	77,671	60,954	106,408	60,903	75,980.70	141,380
Total	26	124,241	96,451	176,399	97,815	120,351.95	220,742
West coast of Canada to Europe:							
Belgian	2	8,133	6,957	10,095	6,776	8,696.25	13,759
British	8	44,829	31,858	51,588	32,107	39,822.50	65,525
Danish	2	10,966	9,411	13,550	9,441	11,763.75	17,572
Dutch	1	8,266	6,197	10,220	6,385	7,746.25	10,296
French	1	7,146	4,020	8,068	4,497	5,025.00	7,877
German	1	7,252	4,792	8,269	5,018	5,990.00	7,914
Italian	1	6,497	4,905	8,124	5,128	6,131.25	8,902
Norwegian	2	11,491	9,186	14,584	9,217	11,482.50	18,280
Swedish	2	10,256	5,751	10,170	7,412	7,188.75	11,464
United States	2	10,900	6,930	11,374	6,900	8,662.50	15,334
Total	22	125,736	90,007	146,042	92,881	112,508.75	176,923
West coast of United States to Europe:							
British	10	46,918	37,831	60,591	37,544	47,185.15	82,621
Dutch	1	4,317	3,492	5,792	3,379	4,365.00	7,416
French	1	5,385	4,595	7,650	4,435	5,743.75	9,210
German	3	14,736	10,199	17,717	10,292	12,748.75	21,957
Japanese	3	13,514	12,203	17,510	12,542	15,087.50	22,749
Norwegian	2	11,827	9,999	16,732	9,943	12,498.75	21,967
Swedish	1	3,532	2,411	4,066	3,144	3,013.75	6,000
Total	21	100,229	80,730	130,058	81,279	100,642.65	171,920
West coast of South America to Europe:							
British	5	30,147	23,426	38,866	24,115	29,282.50	34,501
Danzig	1	6,127	5,268	8,939	5,007	6,585.00	11,330
Dutch	3	15,936	8,510	14,710	8,890	10,637.50	16,989
French	1	4,834	3,223	5,390	3,219	4,028.75	7,708
German	6	27,731	20,201	32,513	19,782	24,030.54	35,489
Norwegian	2	7,640	5,349	8,868	5,300	6,686.25	10,855
Total	18	92,405	65,977	109,286	66,313	81,250.54	116,872

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of South America to Cristobal:							
Colombian.....	3	450	441	673	441	\$534.85	361
Dutch.....	2	1,434	588	1,560	646	735.00	1,115
German.....	5	4,232	2,879	5,398	2,974	3,598.75	3,341
Total.....	10	6,166	3,908	7,631	4,061	4,868.60	4,817
Australasia to Europe:							
British.....	8	68,810	48,178	81,515	49,778	60,222.50	43,193
Philippine Islands to east coast of United States:							
British.....	1	6,726	5,580	9,031	5,376	6,975.00	12,652
Japanese.....	3	15,600	13,108	19,908	12,910	16,218.75	20,212
Norwegian.....	1	7,063	4,017	6,744	4,109	5,021.25	5,979
United States.....	1	6,100	4,872	7,610	4,872	6,090.00	5,835
Total.....	6	35,489	27,577	43,293	27,267	34,305.00	44,678
Hawaii to east coast of United States:							
United States.....	3	14,440	10,377	16,751	10,410	12,971.25	23,141
West coast of United States to Cristobal:							
United States.....	3	6,761	6,270	10,216	6,171	7,734.45	1,526
West coast of Canada to east coast of United States:							
Norwegian.....	2	8,462	5,015	8,478	5,088	6,268.75	13,143
United States.....	1	4,297	2,986	4,747	2,955	3,732.50	4,542
Total.....	3	12,759	8,001	13,225	8,043	10,001.25	17,685
West coast of South America to east coast of Canada:							
British.....	3	18,044	15,587	28,085	16,138	19,483.75	37,730
Canadian intercoastal:							
British.....	2	5,015	4,042	6,873	4,124	5,052.50	7,014
West coast of Central America to Cristobal:							
British.....	2	1,441	1,286	2,298	1,304	1,607.50	568
West coast of Central America to Europe:							
French.....	1	4,101	3,247	5,280	3,228	4,058.75	4,827
German.....	1	1,469	1,297	1,930	1,128	1,621.25	2,750
Total.....	2	5,570	4,544	7,210	4,356	5,680.00	7,577
Australasia to east coast of United States:							
United States.....	2	10,151	7,352	11,526	7,127	9,190.00	13,065
Australasia to east coast of Canada:							
British.....	2	9,666	7,689	9,632	7,753	9,611.25	4,716
Far East to east coast of United States:							
Japanese.....	2	11,044	8,705	14,007	8,498	10,881.25	5,616
Far East to West Indies:							
Norwegian.....	2	8,676	4,645	7,974	4,678	5,806.25	13,862
West coast of United States to east coast of Central America:							
Norwegian.....	1	2,080	1,305	2,166	1,298	1,631.25	2,563
West coast of United States to east coast of South America:							
Danish.....	1	6,054	5,058	8,271	5,057	6,322.50	12,100
West coast of United States to West Indies:							
Norwegian.....	1	5,035	4,395	7,078	4,411	3,625.20	.....
West coast of Canada to east coast of South America:							
Norwegian.....	1	5,308	2,894	4,873	2,984	3,617.50	5,339
West coast of Canada to West Indies:							
British.....	1	2,207	1,239	2,338	1,249	1,548.75	3,294
West coast of Central America to east coast of United States:							
German.....	1	3,533	2,542	4,201	2,554	2,543.76	.....

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Balboa to east coast of United States:							
United States.....	1	55	67	98	67	\$66.00	.....
Balboa to Cristobal:							
Panamanian.....	1	59	54	94	54	67.50	.....
Balboa to West Indies:							
United States.....	1	2,335	1,906	2,991	1,728	1,681.20	.....
Hawaii to Europe:							
Swedish.....	1	5,661	3,406	5,642	4,320	4,257.50	7,762
Far East to Europe:							
British.....	1	4,683	3,705	5,971	3,757	4,631.25	6,170
Grand total, August, 1930.....	221	1,087,392	818,416	1,352,631	826,075	1,017,860.60	1,469,062
Grand total, August, 1929.....	274	1,251,667	971,908	1,588,746	976,531	1,207,778.46	1,822,069
Grand total, August, 1928.....	255	1,172,387	896,159	1,470,265	902,489	1,114,163.80	1,672,828

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 8, 1930.

No. 753.

Colombia, Tumaco Road, lights extinguished. The following information was reported to the Cristobal Hydrographic office by the Panama Railroad S. S. *Buena-ventura*:

On September 1, 1930, El Morro Island light and buoy No. 3, Tumaco Road, Colombia, were not burning.

Approximate positions: El Morro Island, Lat. 01° 50' 50" N., Long. 78° 43' 50" W.; buoy No. 3, Lat. 01° 51' 45" N., Long. 78° 43' 54" W.

J. L. SCHLEY,
Acting Governor.

Traffic by Nationality for August, 1930.

The following tabulation shows the commercial traffic through the Canal during the month of August, 1930, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with corresponding totals for August, 1929 and 1928:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,976	4,568	7,138	3,988	\$5,710.00	5,200
British.....	57	314,606	225,620	375,790	229,158	266,933.96	191,634
Chilean.....	2	9,377	6,899	14,620	7,952	8,623.75	3,206
Colombian.....	3	450	441	673	441	532.45	696
Danish.....	4	19,310	14,531	23,602	14,681	16,919.84	11,213
Danzig.....	1	6,310	5,346	8,940	5,050	4,543.20	.....
Dutch.....	6	24,803	16,661	27,792	16,880	20,826.25	13,092
French.....	5	31,663	22,668	37,644	23,305	24,988.50	8,577
German.....	17	59,206	43,087	71,800	43,251	52,251.05	34,386
Italian.....	3	22,870	15,746	30,819	17,306	19,682.50	5,944
Japanese.....	5	27,965	22,714	35,576	23,041	28,140.35	26,157
Norwegian.....	20	105,837	73,103	122,951	73,294	78,952.48	68,046
Panamanian.....	3	6,810	5,807	9,244	5,806	4,976.70	198
Swedish.....	6	30,622	20,104	52,324	24,781	21,969.33	13,891
United States.....	111	593,376	456,053	739,834	455,576	507,284.46	297,167
Total, August, 1930.....	244	1,258,181	933,348	1,558,747	944,570	1,062,369.82	679,407
Total, August, 1929.....	267	1,307,072	971,968	1,607,157	975,948	1,119,659.40	858,661
Total, August, 1928.....	271	1,264,859	960,408	1,586,980	967,722	1,084,905.51	752,508

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	8,133	6,957	10,095	6,776	\$8,696.25	13,759
British.....	50	267,796	203,257	335,178	206,708	253,967.65	340,853
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	1,389
Colombian.....	3	450	441	673	441	534.85	361
Danish.....	3	17,020	14,469	21,821	14,498	18,086.25	29,672
Danzig.....	2	14,294	10,753	17,891	10,103	13,441.25	24,330
Dutch.....	7	29,993	18,787	32,282	19,300	23,483.75	35,816
French.....	4	21,466	15,085	26,388	15,379	18,856.25	29,622
German.....	17	58,953	41,910	70,028	41,748	50,533.05	71,451
Italian.....	1	6,497	4,905	8,124	5,128	6,131.25	8,902
Japanese.....	8	40,158	34,016	51,425	33,950	42,187.50	48,577
Norwegian.....	14	67,582	46,805	77,497	47,028	56,637.70	91,993
Panamanian.....	1	59	54	94	54	67.50	.....
Swedish.....	5	23,870	15,311	35,217	19,253	19,138.65	46,880
United States.....	103	526,449	402,233	658,608	401,733	501,807.35	725,007
Total, August, 1930.....	221	1,087,392	818,416	1,352,631	826,075	1,017,860.60	1,469,062
Total, August, 1929.....	274	1,251,667	971,908	1,588,746	976,531	1,207,778.46	1,822,069
Total, August, 1928.....	255	1,172,387	896,159	1,470,265	902,489	1,114,163.80	1,672,828

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	3	13,109	11,525	17,233	10,764	\$14,406.25	18,959
British.....	107	582,402	428,877	710,968	435,866	520,901.61	532,487
Chilean.....	3	14,049	10,332	21,930	11,928	12,915.00	5,045
Colombian.....	6	900	882	1,346	882	1,067.30	1,057
Danish.....	7	36,330	29,000	45,423	29,179	35,006.09	40,885
Danzig.....	3	20,604	16,099	26,831	15,153	17,984.45	24,330
Dutch.....	13	54,796	35,448	60,074	36,180	44,310.00	48,908
French.....	9	53,129	37,753	64,032	38,744	43,844.75	38,199
German.....	34	118,159	84,997	141,828	84,999	102,784.10	105,837
Italian.....	4	29,367	20,651	38,943	22,434	25,813.75	14,846
Japanese.....	13	68,123	56,730	87,001	56,991	70,327.85	74,734
Norwegian.....	34	173,419	119,908	200,448	120,322	135,620.18	160,039
Panamanian.....	4	6,869	5,861	9,338	5,860	5,044.20	198
Swedish.....	11	54,492	35,415	87,541	44,031	41,108.08	60,771
United States.....	214	1,119,825	858,286	1,398,442	857,309	1,009,096.81	1,022,174
Total, August, 1930.....	465	2,345,573	1,751,764	2,911,378	1,770,645	2,080,230.42	2,148,469
Total, August, 1929.....	541	2,558,739	1,943,876	3,195,903	1,952,479	2,327,437.86	2,680,730
Total, August, 1928.....	526	2,437,246	1,856,567	3,057,243	1,870,211	2,199,069.31	2,425,336

Tanker Traffic Through the Panama Canal in August, 1930.

During the month of August, 1930, 95 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 526,104, on which tolls of \$461,949.41 were paid. Cargo amounted to 490,437 tons, which included 456,110 tons of mineral oil and 14,613 tons of creosote, and 19,714 tons of molasses. In point of net tonnage, tanker traffic decreased 9.7 per cent as compared with the same traffic for the corresponding month-a year ago, while cargo tonnage decreased 18.4 per cent.

Tank vessels comprised 20.4 per cent of the total commercial transits through the Canal during the month; made up 22.4 per cent of the total Panama Canal net tonnage; were the source of 22.2 per cent of the tolls collected; and carried 22.8 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of August, 1930, segregated by

direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for August, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
Belgian.....	1	4,976	\$5,710.00	¹ 5,200
British.....	9	44,944	36,968.16	² 21,538
Danzig.....	1	6,310	4,543.20	
French.....	1	6,907	5,019.75	
German.....	1	4,340	3,124.80	
Norwegian.....	5	23,847	17,079.84	
Panamanian.....	1	6,650	4,788.00	
United States.....	30	176,016	128,725.36	14,677
Total, August, 1930.....	49	273,990	205,959.11	41,415
Total, July, 1930.....	51	281,690	202,949.10	
Total, June, 1930.....	65	345,896	256,991.09	27,972
Total, August, 1929.....	50	259,668	194,731.47	34,356
<i>Pacific to Atlantic.</i>				
British.....	13	66,038	70,932.65	³ 125,162
Danish.....	1	6,054	6,322.50	12,100
Danzig.....	2	14,294	13,441.25	24,330
Dutch.....	1	4,317	4,365.00	7,416
French.....	1	5,385	5,743.75	9,210
German.....	1	4,435	4,742.50	8,447
Norwegian.....	3	16,862	16,123.95	21,967
United States.....	24	134,729	134,348.70	⁴ 240,390
Total, August, 1930.....	46	252,114	255,990.30	449,022
Total, July, 1930.....	69	375,067	385,446.09	688,237
Total, June, 1930.....	44	245,517	251,649.15	432,961
Total, August, 1929.....	59	322,779	329,195.06	566,907

¹ Creosote.² Includes 9,413 tons creosote.³ Includes 12,652 tons of molasses.⁴ Includes 7,062 tons of molasses.

The following tabulation shows the tanker traffic through the Canal during August, 1930, classified according to trade routes:

ATLANTIC TO PACIFIC.

Trade routes.	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	27	153,398	\$110,512.71	
United States to South America.....	1	4,326	3,114.72	
United States to Far East.....	1	7,388	6,473.75	11,750
Canada to South America.....	2	12,766	9,191.52	
Central America to South America.....	1	3,892	4,203.75	7,619
West Indies to South America.....	1	3,326	3,590.00	4,506
West Indies to Balboa.....	1	2,235	2,382.50	2,927
Europe to United States.....	12	71,517	53,460.64	¹ 9,413
Europe to Canada.....	1	4,976	5,710.00	² 5,200
Europe to South America.....	2	10,166	7,319.52	

¹ Creosote.

PACIFIC TO ATLANTIC.

Trade routes.	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	22	128,108	\$128,826.25	233,328
United States to South America.....	1	6,054	6,322.50	12,100
United States to Hawaii.....	1	5,035	3,625.20	
United States to Australasia.....	11	55,254	58,936.40	99,863
South America to United States.....	4	20,145	19,713.75	34,957
South America to Canada.....	3	18,044	19,483.75	37,730
South America to Europe.....	1	6,127	6,585.00	11,330
Balboa to West Indies.....	1	2,335	1,681.20	
Hawaii to United States.....	1	4,286	3,841.25	² 7,062
Philippine Islands to United States.....	1	6,726	6,975.00	² 12,652

² Molasses.

Of the tanker traffic passing through the Canal in August, 1930, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for August, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
August, 1930.....	33	193,904	\$139,567.59	.....
July, 1930.....	45	248,984	179,400.73	.....
June, 1930.....	56	300,724	219,484.66	9,782
August, 1929.....	36	185,410	134,683.91	7,400
<i>From Los Angeles.</i>				
August, 1930.....	33	183,370	185,721.60	325,811
July, 1930.....	56	302,142	307,081.25	545,893
June, 1930.....	33	189,882	191,944.40	330,780
August, 1929.....	43	236,932	237,282.96	401,565

United States Intercoastal Traffic by Commodities for August, 1930.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for August, 1930, and the totals for August, 1929 and 1928. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Aeroplanes.....		37	37
Agricultural implements.....	209	149	358
Alfalfa.....		1,345	1,345
Alfalfa meal.....		661	661
Ammonia.....	43		43
Asbestos.....	27		27
Asphalt.....	139	46	185
Automobiles.....	3,410	183	3,593
Automobile accessories.....	774	140	914
Bamboo.....		23	23
Bark:			
Cascara.....		19	19
Other.....	28	507	535
Beans.....	189	1,555	1,744
Borax.....		269	269
Bricks.....	95		95
Burlap.....	140	93	233
Calcium carbide.....	40		40
Camphor.....		11	11
Canned:			
Fish.....	271	9,373	9,644
Fruit.....	34	21,281	21,315
Meat.....		800	800
Milk.....		55	55
Soup.....	2,359		2,359
Vegetables.....	446	3,410	3,856
Miscellaneous.....	2,519	5,789	8,308
Carbon black.....	32		32
Celite filtercel.....		954	954
Cement.....	377	27	404
Charcoal.....	161	120	281
Chemicals.....	783	112	895
China and fire clay.....	118	206	324
Coal.....	1,500		1,500
Cocoa.....	198	66	264
Coconuts.....	19	311	330
Coffee.....	424	51	475
Coke.....	820		820
Cold storage:			
Beef.....	17	9	26
Butter.....		250	250
Cheese.....	100	161	261
Other.....	602	402	1,004

	Atlantic. to Pacific.	Pacific to Atlantic.	Totals.
Confectionery.....	447		447
Cork.....	518		518
Cotton.....	749	762	1,511
Cottonseed meal.....		479	479
Cyanide.....	50		50
Drugs.....	983	43	1,026
Dyes.....	11		11
Dyewoods.....	15		15
Earthenware.....	106	121	227
Eggs, dried.....		126	126
Explosives.....	45	9	54
Fertilizer.....	200		200
Flour.....	324	5,132	5,456
Fruit:			
Dried.....	34	3,540	3,574
Fresh.....	7	1,190	1,197
Fuller's earth.....	500	54	554
Furniture.....	190	56	246
General.....	44,654	16,500	61,154
Glass and glassware.....	1,228	289	1,517
Glue.....	62	15	77
Granite.....	170		170
Gum.....		16	16
Hair.....	63	128	191
Hardwoods.....	521	100	621
Hay.....		1,717	1,717
Hemp.....		1,633	1,633
Honey.....		131	131
Hops.....		46	46
Infusorial earth.....		30	30
Kapok.....		111	111
Lard substitute.....	2,038	13	2,051
Leather.....	8		8
Lime.....	229		229
Linoleum.....	443	50	493
Liquors.....	225		225
Lumber.....	2,460	120,754	123,214
Maize.....	13		13
Malt.....	104		104
Manufactured goods:			
Iron and steel.....	76,724	1,284	78,008
Machinery.....	2,527	238	2,765
Railroad material.....	42		42
Tinplate.....	9,569		9,569
Textiles.....	2,663	284	2,947
Miscellaneous.....	4,141	341	4,482
Marble.....	88		88
Matches.....	143		143
Metals:			
Antimony.....		50	50
Copper.....		2,387	2,387
Iron.....	2,225	654	2,879
Lead.....	27	829	856
Scrap.....	575	835	1,410
Zinc.....		946	946
Other.....		27	27
Milk, powdered.....		753	753
Molasses.....	116		116
Musical instruments.....	12		12
Nuts.....		58	58
Oats.....	61		61
Oils:			
Coconut.....		800	800
Cottonseed.....	111		111
Crude.....	54		54
Gas oil, fuel oil.....	30	22,681	22,711
Gasoline, benzine, naphtha.....		232,178	232,178
Kerosene.....		9,071	9,071
Lubricating and greases.....	3,582	74	3,656
Olive.....	93		93
Vegetable.....		27	27
Other.....	270		270
Ores:			
Antimony.....		60	60
Copper.....		407	407
Magnesite.....		72	72
Manganese.....		100	100
Other.....	30		30
Paint.....	334	48	382
Paper.....	6,898	6,891	13,789
Paper pulp.....	52	8,612	8,664
Paper roofing.....		32	32
Peanuts.....	215	342	557
Peas.....		43	43
Phosphates.....	2,338		2,338

	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Porcelain	180	1,481	1,661
Quicksilver		4	4
Rags	38	727	765
Rice	83	70	153
Rope	30	76	106
Rosin	1,802		1,802
Rubber, manufactured	586	60	646
Salt	171		171
Seeds:			
Hemp		166	166
Other		178	178
Shells	1,003		1,003
Silk		704	704
Skins and hides		1,256	1,256
Slag	1,201		1,201
Slate	955		955
Soap	2,095	446	2,541
Soda	533		533
Soda ash	1,259		1,259
Soda, bicarbonate	128		128
Soda, caustic	110		110
Sugar	30	11,528	11,558
Sulphur	17,616		17,616
Syrup	233	65	298
Talc		78	78
Tallow		207	207
Tar	16	25	41
Tobacco	986	47	943
Toys	32	119	151
Turpentine	95		95
Vegetables	14	412	426
Waste		65	65
Wax	15	129	144
Wheat		143	143
Wine		113	113
Wool	10	2,412	2,422
Total, August, 1930	214,322	512,105	726,427
Total, August, 1929	291,381	690,983	982,364
Total, August, 1928	243,405	595,539	838,944

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 8, 1930.

No. 755.

Panama, Panama Bay, Knocker Rock gas buoy, characteristic of light changed. The following is quoted from "Notice to Mariners," Washington, D. C., August 31, 1930:

The light on Knocker Rock gas buoy has been changed from flashing white to flashing red every 6 seconds, flash 1 second, eclipse 5 seconds. Approximate position, Lat. 8° 57' 00" N., Long. 79° 31' 20" W.

J. L. SCHLEY,
Acting Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending September 6, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
City of Panama	Panama Mail S. S. Co.	August 23	August 31	345	
Champerico	Pacific Steam Navigation Co.	August 23	August 23		1
Toyama Maru	Nippon Yusen Kaisha	August 24	August 25	151	
Frost	West India Oil Co.	August 24	August 28	300	
Benjamin Franklin	Fred Olsen & Co.	August 24	August 25	824	
Santa Teresa	Grace Line	August 26	August 26	17	179
Ecuador	Panama Mail S. S. Co.	August 26	August 27	221	342
El Salvador	Panama Mail S. S. Co.	August 26	August 27	67	2
Arwyco	General Navigation Co.	August 27	August 28		75
Somme	U. S. Government	August 27	August 28	34	10
Kenowis	U. S. Government	August 27	August 29	1	35
Tong King	East Asiatic Co.	August 27	August 28	62	
Cerigo	Hamburg-American Line	August 27	August 27	200	
Malmanger	Westfal, Larsen & Co.	August 27	August 30	9,202	
Salsaas	S. A. Nanset.	August 28	August 31	6,839	
La Perla	United Fruit Co.	August 28	August 29	116	70
Santa Clara	Grace Line	September 3	September 3	95	8
Boskoop	Royal Netherlands S. S. Co.	September 3	September 3	87	
California	Panama-Pacific S. S. Line	September 5	September 5		179

New Light Ship Transits Canal.

The lightship *Fire Island* arrived at Balboa from Portland, Oreg., on September 2, and after taking on fuel oil and supplies, transited the Canal on September 4. She is bound for New York via Charleston, S. C., and is due to arrive at her destination about September 18.

The *Fire Island*, which was built by the Albina Marine Iron Works at Portland, Oreg., and launched in December, 1929, is one of three new lightships in the Lighthouse Service of the Department of Commerce and is to replace the present ship at Fire Island, off long Island, N. Y. The new lightship is equipped with a number of improvements and new features not seen on old lightships. The *Fire Island* is powered with Diesel-electric engines and is to be equipped with a radio beacon before being put into service. The service of the old lightship, equipped with only a fixed light, was diminished during periods of poor visibility. The new ship, equipped with the radio beacon, will enable vessels to ascertain their position regardless of the visibility. The *Fire Island* has a length of 123 feet, beam of 30 feet, and draft of 11 $\frac{3}{4}$ feet.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending August 30, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
Cartago.....	United Fruit Co.....		August 24.....		4
Alaska.....	French Line.....		August 24.....		2
Pastores.....	United Fruit Co.....	August 24.....	August 24.....	23	307
Benjamin Franklin.....	Fred Olsen & Co.....	August 24.....	August 24.....	264	(²)
Galicia.....	Hamburg-American Line.....	August 24.....	August 24.....	(¹)	239
Castilla.....	United Fruit Co.....	August 24.....	August 25.....	1	134
Wisconsin.....	French Line.....	August 24.....	August 25.....	263	104
Donau.....	North German Lloyd.....	August 24.....	August 25.....	181	187
Tayama Maru.....	Nippon Yusen Kaisha Line.....	August 25.....	August 25.....	133	(²)
Tai Yin.....	Barber Line.....	August 25.....	August 25.....	79	133
Axel Johnson.....	Johnson Line.....	August 25.....	August 25.....	123	(²)
Wido.....	North German Lloyd.....	August 25.....	August 26.....	180	97
Haarlem.....	Royal Netherlands S. S. Co.....	August 25.....	August 26.....	156	107
Santa Teresa.....	Grace Line.....	August 25.....	August 26.....	36	529
El Salvador.....	Panama Mail S. S. Co.....	August 25.....	August 26.....	240	519
Cauca.....	United Fruit Co.....	August 25.....	August 27.....	248	242
Virgilio.....	Italian S. S. Line.....	August 25.....	August 27.....	164	(²)
Ulua.....	United Fruit Co.....	August 25.....	August 27.....	324	4
Kyphissia.....	Hamburg-American Line.....	August 26.....	August 26.....	220	221
Wyoming.....	French S. S. Line.....	August 26.....	August 26.....	38	8
Vermar.....	Calmar S. S. Corp.....	August 26.....	August 27.....	774	(²)
Gruenwald.....	Hamburg-American Line.....	August 26.....	August 27.....	96	3
Parthenia.....	Donaldson S. S. Line.....	August 26.....	August 27.....	(¹)	370
Marsteneu.....	Aluminium S. S. Line.....	August 26.....	August 27.....	470	(²)
Pacific Enterprise.....	Furness Line.....	August 26.....	August 29.....	(¹)	469
Cristobal.....	Panama R. R. S. S. Line.....	August 27.....	August 27.....	3,257	7
Pearl Marie.....	R. Feuillebois.....	August 27.....	August 27.....	(¹)	7
Ecuador.....	Panama Mail S. S. Co.....	August 27.....	August 28.....	609	202
Sixaola.....	United Fruit Co.....	August 27.....	August 28.....	340	87
Tela.....	United Fruit Co.....	August 27.....	August 28.....	646	207
Margaret Johnson.....	Johnson Line.....	August 27.....	August 28.....	(¹)	117
Mercian.....	Leyland S. S. Line.....	August 27.....	August 28.....	460	(²)
Cerigo.....	North German Lloyd.....	August 27.....	August 27.....	381	16
Mary V.....	Lin Ming.....	August 28.....	August 28.....	(¹)	235
Teno.....	Chilean S. S. Line.....	August 28.....	August 29.....	(¹)	672
Bolivar.....	United Fruit Co.....	August 28.....	August 29.....	120	301
Manizales.....	North German Lloyd.....	August 28.....	August 30.....	767	6
Orduna.....	Pacific Steam Navigation Co.....	August 29.....	August 29.....	6	(²)
La Perla.....	United Fruit Co.....	August 29.....	August 30.....	634	(²)
Castilla.....	United Fruit Co.....	August 29.....	August 30.....	38	54
Atlantida.....	Standard Fruit & S. S. Co.....	August 29.....	August 30.....	147	359
Acajutla.....	Pacific Steam Navigation Co.....	August 29.....	August 29.....	363	117
Santa Maria.....	Grace Line.....	August 30.....	August 30.....	117	56
Parismina.....	United Fruit Co.....	August 30.....	August 30.....	56	74
Peter Kerr.....	States S. S. Line.....	August 30.....	August 30.....	74	5
Dora K.....	R. Feuillebois.....	August 30.....	August 30.....	(¹)	

¹ No cargo discharged.

² No cargo laded.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., September 17, 1930. No. 7.

Cargo Through the Canal During August, 1930.

On pages 92 and 93 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in August, 1930. This cargo, segregated according to direction, as compared with August, 1929, and the differences are shown in the following tabulation:

	August, 1929.	August, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	858,661	679,407	-179,254
Pacific to Atlantic.....	1,822,069	1,469,062	-353,007
Total.....	2,680,730	2,148,469	-532,261

It will be noted from the above that the Atlantic to Pacific tonnage decreased 179,254 tons, or 20.9 per cent, as compared with August, 1929, and that from the Pacific to Atlantic decreased 353,007 tons, or 19.4 per cent, making a total decrease of cargo tonnage in both directions of 532,261 tons, or 19.9 per cent. The heavy decrease from the Atlantic was accounted for by a general curtailment in shipments and a large decrease in cargo tonnage of several important commodities as indicated under "Principal commodities." Shipments of manufactured iron and steel declined 84,226 tons; automobiles and accessories, 21,183 tons; mineral oils, 10,617 tons; and cement, 23,031 tons. There was an increase of 32,553 tons of sulphur from the Atlantic. The decrease from the Pacific was due to losses in tonnage of mineral oils, 93,958 tons; lumber, 177,648 tons; nitrates, 97,366 tons; and barley, 17,000 tons. Wheat, molasses, rice, and cold storage cargo show increases of 47,212 tons, 13,860 tons, 13,282 tons, and 11,171 tons, respectively.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty and five-tenths per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 26.7 per cent in Europe. Tonnage from the United States decreased 125,561 tons, or 23.4 per cent, as compared with August, 1929, and the proportion to the total in August, 1930, was lower. The amount originating in Europe decreased 68,870 tons, or 27.5 per cent, and the percentage of the whole was lower in August of this year.

Destination.—Forty-two and four-tenths per cent of the Pacific-bound tonnage was destined to the United States; 13.9 per cent to South America; 18.6 per cent to Asia; and 15.9 per cent to Australasia. Cargo tonnage to all these areas declined as compared with August, 1929, in actual tonnage as follows: To the United States, 90,507 tons, or 23.9 per cent; to South America, 26,374 tons, or 21.9 per cent; to Australasia, 24,104 tons, or 18.3 per cent; and to Asia, 45,484 tons, or 26.4 per cent. In point of relation of cargo destined to the aforemen-

tioned areas to the total tonnage in this direction, that to the United States, South America, and Asia decreased, while that to Australasia showed a gain.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 52.6 per cent came from the United States; 25.9 per cent from South America; 10.3 per cent from Canada; 4.5 per cent from Asia; and 4.4 per cent from Australasia. As compared with the corresponding month a year ago, tonnage from the United States decreased 297,471 tons, or 27.8 per cent, and the percentage of the total was lower in August, 1930. Cargo tonnage from South America decreased 127,713 tons, or 25.1 per cent, and also showed a reduced percentage in its relation to the total cargo. Tonnage from Canada increased 18,272 tons, or 13.8 per cent, with an increase in the percentage of the total. Asia showed a cargo increase of 30,427 tons, or 85.1 per cent, while Australasia showed an increase of 11,576 tons, or 21.6 per cent. Each of these areas showed an increase in the percentage to the total cargo. The decrease in cargo tonnage from the United States was principally due to lumber and mineral oils. The greater part of the decrease from South America was caused by lessened nitrate shipments. The gain from Canada was due to wheat shipments and that from Australasia to larger shipments of meat in cold storage and wool. The increase from Asia was due to large shipments of molasses and rice.

Destination.—Segregated according to destination, 57.3 per cent of the cargo in this direction went to the United States, and 35.6 per cent to Europe. Tonnage to the United States decreased in its proportion to the total tonnage and showed a decrease in actual tonnage of 243,644 tons, or 22.4 per cent. That to Europe decreased 83,219 tons, or 13.7 per cent, while its relation to the total cargo was greater.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify 85.0 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 15.0 per cent consists, for the most part, of manufactured articles in small lots reported as "General cargo."

Atlantic to Pacific-bound commodities which aggregated more than 10,000 tons for August, 1929, or August, 1930, are listed in the following tabulation, showing differences:

Commodity.	August, 1929.	August, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	
Ammonia.....	10,830	4,254	-6,576
Asphalt.....	18,184	18,634	+450
Automobiles.....	23,387	8,953	-14,434
Automobile accessories.....	10,150	3,401	-6,749
Cement.....	48,220	25,189	-23,031
Coal and coke.....	14,205	12,131	-2,074
Cotton.....	8,176	10,991	+2,815
Creosote.....	3,047	14,624	+11,577
Manufactured goods:			
Iron and steel.....	213,031	128,805	-84,226
Machinery.....	15,949	12,742	-3,207
Railroad material.....	20,425	5,441	-14,984
Textiles.....	13,356	9,170	-4,186
Tinplate.....	20,156	20,025	-131
Miscellaneous.....	13,699	6,580	-7,119
Metal, scrap (principally iron).....	12,785	10,732	-2,053
Oils, mineral.....	72,393	61,731	-10,617
Paper.....	29,571	22,693	-6,878
Phosphates.....	31,344	36,437	+5,093
Sugar.....	6,591	11,367	+4,776
Sulphur.....	1,567	34,120	+32,553

The above 20 commodity groups comprise 67.4 per cent of the cargo moving from the Atlantic to the Pacific during August, 1930. Fifteen of the items show decreases and 5 increases as compared with August, 1929. The largest decline was in manufactured iron and steel.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify 98.4 per cent of all cargo moving from the Pacific to Atlantic during the month of August, 1930. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1929 are listed below:

Commodity.	August, 1929.	August, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Asphalt.....	11,104	1,520	-9,584
Barley.....	40,690	23,690	-17,000
Canned goods (fish, fruit, vegetables, etc.).....	55,836	53,803	-2,033
Cold storage (food products) *.....	18,396	29,567	+11,171
Copra.....	20,947	4,000	-16,947
Fruit, dried.....	13,631	10,152	-3,479
Fruit, fresh.....	11,638	6,981	-4,657
Lumber.....	371,798	194,150	-177,648
Metals, various.....	67,250	52,656	-14,594
Molasses.....	7,000	20,860	+13,860
Nitrates.....	164,283	66,917	-97,366
Oils, mineral.....	554,837	460,879	-93,958
Ores (principally iron).....	175,769	173,096	-2,673
Pulp.....	15,725	9,201	-6,524
Rice.....	3,265	16,547	+13,282
Sugar.....	63,538	63,513	-25
Wheat.....	94,832	142,044	+47,212

* Fresh fruit not included.

The above 17 commodity groups comprise 90.5 per cent of the cargo moving from the Pacific to the Atlantic during August, 1930. Thirteen of the items show decreases and 4 increases. Food products in cold storage, molasses, rice, and wheat show increases. Lumber, nitrates, and mineral oils were the commodities which decreased most heavily.

(Continued on page 92.)

New Vessels for United Fruit Company.

According to an announcement of the United States Shipping Board, loans to the United Mail Steamship Company aggregating \$15,412,500 are to be used in aid of building 6 passenger cargo steamships for the Central-American services of the United Fruit Company.

The vessels to be built under these loans will be 447 feet long, 60 feet beam, and 24 feet draft, with a deadweight tonnage of 4,000 tons each. They will be equipped with turbo-electric drive and an average speed of 16½ knots is expected. Three of the vessels will be operated between San Francisco and Cristobal, stopping at Puerto Armuelles, Panama, and 3 between New York and Port Limon, Costa Rica.

* Following the development of new plantations on the Pacific side of Panama, in the region near Puerto Armuelles, the United Fruit Company discontinued its service from Port Limon to San Francisco via the Canal, displacing it by the service from Cristobal to California, via Balboa, Puerto Armuelles, and San Jose de Guatemala. Three of the new vessels will be used in this service, which now employs the steamships *La Perla*, *San Jose*, *San Mateo*, *Esparta*, *Saramacca*, and *Suriname*.

It is stated that the 6 new ships are to be completed and in operation within 3 years.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, September 13, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.	
San Francisco	6	2.30	7	6.05	7	12.53	7	14.00	German	Hamburg-American Line	432.3	60.0	23.0	Hamburg, Germany	Vancouver, B. C.	General	4,795	8,454	6,314	
Santa Teda	6	6.05	7	6.00	7	13.43	7	20.05	American	N. O. & S. A. S. S. Line.	298.6	40.0	16.3	New Orleans, La.	Talcahuano, Chile	General	1,179	2,532	1,803	
Baron Tweed-																				
month.	7	2.25	7	6.20	7	14.09	7	18.09	British	Hogarth Shipping Co.	340.0	48.0	14.6	Charleston, S. C.	Guano Island, Peru	Ballast	5,000	3,940	2,793	
Cape York	7	4.00	7	7.50	7	14.39	7	15.05	British	Lyle Shipping Co.	409.0	54.0	20.6	Antwerp, Belgium	San Francisco, Cal.	Silver sand.	6,927	4,802	3,402	
Melton	7	4.20	7	7.50	7	15.04	7	16.10	American	Tidewater S. S. Co.	425.6	57.0	20.0	New York, N. Y.	Los Angeles, Calif.	Ballast	2,128	6,372	5,212	
Semmoles	7	9.15	7	9.30	7	15.44	7	16.50	American	Roosevelt S. S. Co., S.B.	402.0	54.0	27.4	Philadelphia, Pa.	Adelaide, Australia	General	139	1,633	1,041	
Durazzo	3	19.50	7	9.40	7	16.31	7	18.00	French	Hamburg-American Line	226.0	34.0	13.9	Cristobal, C. Z.	Guayaquil, Ecuador	General	431	7,351	5,189	
Arizona	7	6.35	7	10.30	7	16.58	7	18.09	German	French Line	425.0	55.0	18.6	Havre, France	Vancouver, B. C.	Coffee, etc.	5,979	7,983	5,883	
Dryden	7	11.05	7	11.10	7	17.59	7	19.51	American	Tampa Intercoast Co.	434.0	57.6	24.0	New Orleans, La.	Iloilo, P. I.	General	1,896	2,874	1,944	
Guayaquil	6	10.55	7	12.37	7	19.35	7	21.09	American	Panama R. R. S. S. Line	251.0	43.6	19.3	New York, N. Y.	Guayaquil, Ecuador	General	1,896	2,874	1,944	
Rohr	6	18.10	7	13.50	7	29.25	8	1.35	German	Hamburg-American Line	453.0	58.3	20.6	Hamburg, Germany	San Antonio, Chile	General, cement.	4,648	8,086	5,918	
K. R. Kings-																				
bury	7	16.30	7	16.50	8	9.09	8	10.30	American	Standard Oil Co.	440.0	55.0	22.0	Perth Amboy, N. J.	Los Angeles, Calif.	Ballast	9,033	5,450	5,933	
Kim	7	15.15	7	17.55	8	11.22	8	16.50	Norwegian	Standard Shipping Co.	396.2	58.0	14.0	Newcastle, Eng.	Talara, Peru	Ballast	9,363	4,386	3,866	
S. C. T. Dodd	7	16.45	8	6.05	8	14.03	8	15.10	American	Standard Oil Co.	425.0	57.2	18.6	Philadelphia, Pa.	San Francisco, Cal.	Ballast	7,481	4,975	3,457	
Tai Ping Yang	8	1.45	8	7.20	8	14.55	8	16.50	Panamanian	Barber S. S. Line.	461.0	60.0	21.8	New York, N. Y.	Hongkong, China.	General	3,944	9,866	6,955	
Atlantic Sun	8	2.05	8	8.35	8	15.53	8	17.09	American	Sun Oil Co.	429.3	59.2	19.0	Tampa, Fla.	Los Angeles, Calif.	Ballast	7,568	5,283	4,765	
Montgomery	8	8.40	8	9.41	8	16.22	8	22.47	American	Isleman S. S. Lines	424.2	56.2	25.10	New York, N. Y.	Seraabaya, Java.	General	7,853	7,611	5,450	
Monroe	8	12.50	8	13.05	8	20.37	9	00.58	French	Desmarais & Co.	425.0	56.0	20.0	Blaye, France	Los Angeles, Calif.	Ballast	5,280	7,106	5,068	
King Maru	8	16.45	8	18.50	9	0.06	9	10.05	Japanese	Otsuka Shos in Kaisha	446.0	60.0	24.0	New York, N. Y.	Shanghai, China.	Gen., tinplate.	8,220	8,952	6,272	
Ensign City	9	4.10	9	6.35	9	14.12	9	15.48	American	Isleman S. S. Lines.	395.5	55.0	27.0	New York, N. Y.	San Francisco, Cal.	General	2,200	7,330	5,259	
Oneda	9	6.05	9	7.10	9	14.27	9	20.53	American	Ford Motor Co.	251.0	43.6	18.6	Chester, Pa.	Long Beach, Calif.	Auto. parts	2,056	1,621	1,021	
Malta	9	00.10	9	9.30	9	15.58	10	17.25	British	New Zealand Gov't.	219.0	35.0	12.6	Newcastle, Eng.	Wellington, N. Z.	General	1,185	400	1,185	
Santa Rita	9	1.30	9	12.00	9	18.00	10	00.30	American	Grace Line	379.0	53.2	20.10	New York, N. Y.	Talcahuano, Chile.	General	1,624	2,185	1,469	
Colombia	8	13.20	9	13.00	9	19.10	10	16.33	American	Panama Mail S. S. Co.	370.0	48.7	23.7	New York, N. Y.	San Francisco, Cal.	General, coffee.	2,125	6,015	4,281	
West Cape	9	12.55	9	13.45	9	21.21	9	22.56	American	McCormick S. S. Co.	409.0	54.0	22.0	Philadelphia, Pa.	Tacoma, Wash.	General	5,983	6,566	4,900	
Sun	10	3.30	10	6.15	10	13.23	10	14.38	American	Sun Oil Co.	489.6	66.0	22.0	Chester, Pa.	Los Angeles, Calif.	Ballast	9,620	6,476	5,283	
J. L. Lucken-																				
bach	10	3.20	10	7.10	10	14.48	10	15.50	American	Luckenbach Line.	448.9	60.0	20.0	Boston, Mass.	Seattle, Wash.	General	4,000	9,294	6,861	
Caradian																				
Highlander	10	7.25	10	7.55	10	16.25	11	09.46	British	Can. Nat. Steamships.	400.0	52.0	20.0	Montreal, Canada.	Bluff, N. Z.	General	4,600	6,192	4,402	
Laurel	10	11.40	10	10.10	10	17.12	10	23.23	Swedish	Vacuum Oil Co.	482.3	65.0	19.10	Glasgow, Scotland.	San Francisco, Cal.	Ballast	6,279	6,604	4,655	
Floamar	10	12.15	10	12.55	10	18.30	10	19.45	American	Calmar Line	410.0	54.2	23.2	Philadelphia, Pa.	Seattle, Wash.	Steel, general.	3,800	6,351	4,958	
West Nilus	10	14.15	10	14.50	10	20.00	10	21.15	American	McCormick S. S. Co.	410.0	53.7	19.0	Rosario, Argentine.	Vancouver, B. C.	Cocoa, coffee.	4,800	6,581	4,958	
Iowan	10	14.15	10	14.20	10	20.53	10	21.50	American	Amer-Hawthorn Line.	407.7	53.7	19.0	Boston, Mass.	Seattle, Wash.	General	3,800	7,079	5,028	
Port Brisbane	10	11.30	10	15.05	10	21.48	10	23.33	British	Com'ith & Dom. Line.	481.0	62.0	25.0	New York, N. Y.	Dunedin, N. Z.	General	1,511	10,708	7,354	

* Lighthouse tender.

* Motor ship.

* Tanker.

	10	16-45	10	19-45	11	9-02	11	10-37	British	Andrew Wear & Co.	407.0	53.6	20.0	Tampico, Mexico.	Brisbane, Australia	Asphalt	5,251	6,003	4,521
Lornaston	11	00-25	11	6-20	11	13-40	11	13-40	American	Arrow Line	409.7	54.2	22.0	Savannah, Ga.	Seattle, Wash.	General	6,225	6,603	4,915
Charles	11	25-11	11	7-10	11	14-32	11	14-32	British	Imperial Oil	470.0	63.2	23.0	Halifax, N. S.	Talara, Peru	Ballast	9,191	5,278	
Christenson	11	8-50	11	9-00	11	15-55	11	17-10	Japanese	Nippon Yusen Kaisha	440.4	57.0	27.0	Baltimore, Md.	Kobe, Japan	Ballast	8,060	8,139	5,400
Ontonolito 2	11	10-45	11	10-55	11	18-09	11	19-15	American	U. S. Tank Ship Corp.	390.0	54.2	25.0	Mobile, Ala.	Honolulu, T. H.	Ballast	3,808	6,205	4,286
Anglo Maru 2	11	13-15	11	12-30	11	19-18	11	20-28	American	States S. S. Co.	410.0	54.4	18.8	Philadelphia, Pa.	Seattle, Wash.	General	3,808	6,484	4,675
Casta	11	13-15	11	16-15	11	19-17	11	19-17	American	U. S. Navy	243.0	36.0	18.0	Cristobal, C. Z.	Ballou, C. Z.	Ballast	4,050	18,206	13,500
Sain Rafael	11	19-10	11	6-10	12	12-30	12	19-00	British	N. Z. Shipping Co.	531.0	70.0	27.6	London, England	Wellington, N. Z.	General	1,170	10,086	7,226
Ningara 2	10	11-25	12	6-05	12	13-38	12	14-55	British	Furness, Withy & Co.	408.4	60.8	19.6	Glasgow, Scotland	Portland, Ore.	Gen., bananas	6,425	4,276	
Pacific	11	02-25	12	7-15	12	14-27	12	16-25	Norwegian	Caracasian Oil Co.	435.0	56.2	22.0	Aurworth, Eng.	Los Angeles, Calif.	Ballast	7,639	5,135	
Ch. Th. Bore 2	12	4-00	12	7-10	12	14-58	12	16-25	American	Standard Oil Co.	435.0	56.2	22.0	Philadelphia, Pa.	San Francisco, Cal.	Ballast	5,478	6,014	4,402
R. J. Hanna 2	12	9-00	12	9-15	12	15-24	12	16-25	American	Blue Star Line	436.0	57.0	25.0	Houston, Texas	Seattle, Wash.	General	4,359	7,139	4,610
Julia Letek-embach	12	4-50	12	9-55	12	16-28	12	17-40	British	Blue Star Line	389.8	53.2	17.9	Newcastle, England	Los Angeles, Calif.	Ballast	180	211	124
Gaestera 2	12	6-15	12	11-10	12	17-30	12	20-55	British	Pacific Stearns Nav. Co.	420.5	54.2	22.1	Hull, England	Corral, Chile	General	3,129	5,914	4,195
Catcha 2	1	15-12	1	12-10	1	19-30	1	22-15	Colombian	National Navigation Co.	116.0	21.0	9.6	Cristobal, C. Z.	Buenaventura, Col.	General	3,310	8,236	6,039
Dixie Arrow 2	12	10-30	12	15-50	13	9-08	13	10-12	American	Standard Transp. Co.	468.0	63.0	21.0	Boston, Mass.	Los Angeles, Calif.	Ballast	7,027	6,291	4,530
Swiflight 2	11	20-40	13	6-13	13	13-15	13	14-25	American	Shell Oil Co.	484.6	60.2	17.6	Curacao, D. W. I.	Los Angeles, Calif.	Ballast	3,192	7,963	5,837
Canadian	12	18-30	13	6-07	13	14-07	13	15-25	British	Can. Nat. Steamships.	400.0	52.0	23.5	Montreal, Canada	Sydney, Australia	General	3,192	7,963	5,837
Commander	12	21-52	13	7-30	13	15-09	13	15-55	British	Verr Line	425.6	58.3	21.0	New York, N. Y.	Manila, P. I.	General	3,192	7,963	5,837
Silverbeech 2	13	3-40	13	7-40	13	15-21	13	17-45	Norwegian	Pern Line	331.4	53.8	23.4	Boca Grande, Fla.	Shanghai, China	Cotton, lumber	3,192	7,963	5,837
Fernmoor 2	12	10-30	13	8-52	13	15-44	13	23-55	Norwegian	Fred Olsen & Co.	435.9	56.0	18.9	Oslo, Norway	Vancouver, B. C.	General, bananas	3,192	7,963	5,837
Laurits	12	19-35	13	9-10	13	16-15	13	17-20	German	North German Lloyd	495.5	63.8	22.6	Hamburg, Germany	Vancouver, B. C.	General	3,192	7,963	5,837
Svenson 2	13	8-35	13	9-40	13	16-46	13	17-45	American	Nav Food Line	370.9	53.1	22.0	Houston, Texas	Los Angeles, Calif.	General	5,100	5,607	4,103
Este	7	8-10	13	10-00	13	17-31	13	18-30	British	Zonal S. S. Co.	371.0	51.4	23.8	Cardiff, land wld.	Antofagasta, Chile	General	6,508	5,134	3,962
Delight	7	14-10	13	11-03	13	18-11	13	19-20	German	Roland Line	216.5	22.9	13.9	Cristobal, C. Z.	Guayaquil, Ecuador	General	6,200	4,828	3,480
Zonave	7	14-10	13	11-03	13	18-11	13	19-20	German	Roland Line	216.5	22.9	13.9	Cristobal, C. Z.	Guayaquil, Ecuador	General	213	3,638	2,308
Call	7	12-20	13	13-53	13	19-48	13	21-50	American	United Fruit Co.	336.7	42.0	17.6	Cristobal, C. Z.	San Francisco, Cal.	General	213	3,638	2,308
Saramacca	7	12-20	13	13-53	13	19-48	13	21-50	American	United Fruit Co.	336.7	42.0	17.6	Cristobal, C. Z.	San Francisco, Cal.	General	213	3,638	2,308
Senla 2	13	12-30	13	17-35	13	17-35	13	17-35	American	U. S. Navy	149.3	30.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast	2,830	1,050	698

Patent fuel, coke, and mt. coal.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

	6	23	7	17	00	265.0	42.1	19.0	Guano	2,830	2,061	1,393					
Loila	6	23-07	7	6-35	7	14-20	7	17-00	Norwegian	William Hansen	265.0	42.1	19.0	Guano	2,830	2,061	1,393
Call	7	5-30	7	6-42	7	14-10	7	14-10	German	Roland Line	216.5	22.9	13.9	General	560	1,105	698
Culobulo	7	3-39	7	7-14	7	15-00	7	15-00	Italian	Nav. Gen. Italiana	531.0	64.0	24.0	General	1,700	12,553	7,916
Buenaventura	7	6-00	7	8-35	7	16-15	7	16-15	American	Panama R. S. S. Line	231.0	43.0	16.0	General	1,072	2,873	1,716
Sojota 7	7	6-00	7	11-40	7	18-40	7	18-40	American	U. S. Navy	155.0	30.0		General	6,200	4,828	3,480
Tyr 8	7	14-50	7	15-48	7	22-30	7	22-30	Norwegian	W. L. Guxey & Co.	337.0	51.3	24.0	Lumber	6,200	4,828	3,480
Arifland 8	7	22-30	8	5-58	8	15-05	8	15-05	Swedish	Ore S. S. Corp.	561.0	72.2	34.0	Iron ore	21,800	15,560	4,406
Minister	7	17-30	8	6-47	8	15-20	8	15-20	Norwegian	Anglo-Saxon Post Co.	416.2	58.0	28.0	General	9,209	7,304	4,912
Wadel 2 8	8	1-35	8	8-15	8	16-15	8	16-15	British	British Malacca Co.	475.0	63.3	28.0	Gasoline	12,000	9,589	3,464
Albopress 2 8	8	1-35	8	8-03	8	17-15	8	17-15	American	Luckenbach Line	434.3	57.7	22.0	General	6,488	7,952	5,922
Jaep Luc-embach	8	11-45	8	12-19	8	18-50	8	18-50	American	Calmar S. S. Corp.	384.4	51.2	23.0	Lumber	5,001	6,327	4,433
Oaknor	8	11-45	8	12-19	8	18-50	8	18-50	American	Calmar S. S. Corp.	384.4	51.2	23.0	Lumber	5,001	6,327	4,433

Motor ship.

Towing barge No. 15.

7 Tug.

8 Tug.

9 Tug.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Salt water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Beam.	Depth.			Nature.	Tons.	Gross.	Net.
Rapok	8	12	8	13	8	20	8	20	40	9	13	09		Valparaiso, Chile.	Hamburg, Germany	General.	8,257	6,583	4,626
Sir Karl	8	19	9	6	9	13	9	13	40	Anglo-Saxon Pet. Co.	450	0	59	2	26	0	10,437	8,085	5,502
Knudsen	8	16	9	6	9	14	9	15	50	Tidewater Oil Co.	424	4	58	2	26	3	9,210	7,333	5,182
Robert E.	9	7	9	8	9	16	9	16	00	Amer.-Hawaiian Line.	443	1	59	8	28	0	9,282	8,507	6,020
Missourian	9	14	9	15	9	21	9	21	50	Wieland & Amundsen.	446	0	56	1	31	0	8,789	8,508	6,179
Karrina, Junk- enhoch	9	15	9	18	9	11	9	11	00	Luck & Amundsen.	347	4	50	0	24	0	6,350	5,125	3,741
Romulus	9	18	9	19	9	12	9	13	30	W. Rimeinan & Co.	399	0	53	0	26	0	8,275	8,275	6,229
Eastmoor	9	17	9	16	9	13	9	13	40	U. S. Army.	448	0	58	0	22	0	7,147	7,082	5,167
Cambrai	9	1	9	6	9	15	9	15	00	Munson, McCork' Line.	401	2	53	2	28	0	211	2,597	1,587
Charles R.	9	22	9	7	9	10	9	10	15	Pacific Steam Nav. Co.	290	1	41	7	16	0	7,284	6,581	4,795
McCormick	9	22	9	7	9	10	9	10	15	Calmar S. S. Corp.	409	8	54	2	25	0	6,118	10,921	7,559
Champerico	10	3	10	7	10	17	10	17	20	N. Z. Shipping Co.	481	6	62	6	25	0	2,452	6,033	4,353
Lesmar	9	18	9	10	9	19	9	19	05	Panama Mail S. S. Co.	380	0	48	7	22	0	5,420	5,084	4,070
Limerick	9	17	9	11	9	25	9	18	35	Williams S. S. Line.	386	8	52	2	23	0	6,151	7,473	5,586
Venezuela	9	17	9	11	9	25	9	18	35	Seas Shipping Co.	424	8	55	7	22	0	3,322	6,529	4,259
Willfaro	10	11	10	12	10	19	10	19	35	Shayne & Hoyt.	324	0	46	2	22	0	8,487	8,487	6,250
Robin Good- fellow	10	11	10	12	10	25	10	25	00	Pacific Steam Nav. Co.	290	1	41	7	16	0	2,520	1,910	1,192
Point Gorda	10	11	10	13	10	25	10	25	00	Wm. Thomson & Co.	429	0	53	9	17	0	3,500	7,846	5,112
Benvenue	10	12	10	13	10	35	10	35	00	Wm. Thomson & Co.	429	0	53	9	17	0	8,467	8,201	6,225
Thyna	10	14	10	14	10	58	10	22	55	United Fruit Co.	336	7	42	0	19	0	5,180	5,053	4,122
Niagara	11	4	11	6	11	13	11	13	15	Hamburg, Germany	462	2	61	2	27	0	8,018	9,139	6,666
Baron Wenjess	11	4	11	6	11	13	11	13	15	Roosevelt S. S. Co.	456	1	56	0	26	0	7,333	8,278	5,839
Lolo	11	4	11	6	11	14	11	14	20	Moer Line, Ltd.	381	0	52	4	23	0	5,553	4,929	3,345
Pacific	11	9	11	10	11	18	11	18	10	Royal Neth. S. S. Co.	302	9	33	1	12	0	4,775	1,182	742
Slupper	11	2	11	10	11	18	11	18	25	Iskahan S. S. Lines	395	5	55	0	18	0	2,481	7,330	5,241
Eagle	11	10	11	11	11	20	11	20	00	Osaka Shosen Kaisha	407	2	50	8	0	0	7,759	6,538	4,769
Sacramento	11	14	11	12	11	25	11	25	00	Amer.-Hawaiian Line.	404	6	53	9	26	0	6,020	6,756	4,775
Saragocca	11	14	11	12	11	25	11	25	00	Furness, Withy & Co.	420	0	58	0	27	3	8,467	8,201	6,225
Portland	11	23	11	7	11	20	11	20	30	Standard Transp. Co.	410	0	56	0	29	0	8,665	8,201	6,225
Triumph	11	3	11	7	11	16	11	16	00	Charles Nelson Co.	380	0	53	2	24	0	5,180	5,053	4,122
Yorkmoor	11	3	11	7	11	16	11	16	00	United Fruit Co.	336	7	42	0	19	0	489	3,668	2,308
Barak	11	21	11	7	11	22	11	22	00	Hamburg, Germany	462	2	61	2	27	0	8,018	9,139	6,666
Mobile City	12	6	12	7	12	15	12	15	12	Roosevelt S. S. Co.	456	1	56	0	26	0	7,333	8,278	5,839
Havans Maru	12	11	12	14	12	20	12	20	15	Moer Line, Ltd.	381	0	52	4	23	0	4,775	1,182	742
Montanan	12	9	12	12	12	22	12	22	13	Iskahan S. S. Lines	395	5	55	0	18	0	2,481	7,330	5,241
	13	5	13	6	13	20	13	20	00	Amer.-Hawaiian Line.	404	6	53	9	26	0	6,020	6,756	4,775

* Tanker. ¹⁶ Coffee, cacao, and teguana. ¹⁷ Barley and canned fruit. ¹⁸ Survey ship. ¹⁹ For orders. ²⁰ Motor ship. ²¹ Coffee, skins, and general. ²² Wheat, lumber, and dried fruit. ²³ Coffee, skins, and general. ²⁴ Wheat, lumber, and dried fruit. ²⁵ Light fuel distillate.

Maple Branch.....	13	3 40	13	7 34	13	14 50	13	15 30	British.....	Nautilus S. S. Co.....	400 0	52 0	23 0	Corral, Chile.....	Liverpool, England	General.....	6,407 ²	5,618 ¹	4,116
Gen. Wm. M. Graham ¹⁸	13	7 40	13	14 50	13	14 50	13	18 50	American.....	U. S. Army.....	160 2	32 0		Balboa, C. Z. Vancouver, B. C.	Cristobal, C. Z.	Lumber.....	4,517	4,716	3,295
Borgestad ¹⁸	13	10 50	13	11 47	13	18 50	13	18 50	Norwegian.....	Christen Knudsen	351 3	51 4	24 0		Port Newark, N. J.				
Santa Barbara ¹⁸	13	10 00	13	12 40	13	18 50	14	2 05	American.....	Grace Line.....	466 0	64 0	25 1	Valparaiso, Chile	New York, N. Y.	General.....	4,039	10,667	6,633
Peltre ¹⁸	13	16 25	13	16 25	14	11 40	14	18 00	Italian.....	Nav. Libera, Tristina.....	436 6	55 4	28 0	Vancouver, B. C.	Venice, Italy.....	General.....	8,757 ¹		
Dalfram.....	13	19 00	13	19 45	14	11 35	14	11 35	British.....	Campbell Brothers.....	406 0	54 1	23 0	Suva, Fiji Islands.	United Kingdom ¹⁸	Raw sugar.....	7,440	6,161	4,559

¹⁸ Mine planter.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.										* DEPARTURES.									
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	To—	Date.	Vessel.	Line.	To—								
September 7.....	Calamares.....	United Fruit Co.....	Port Limon, Costa Rica.	September 7.....	Orinoco.....	Hamburg-American Line	Hamburg via wayports.												
September 7.....	Iriana.....	United Fruit Co.....	Puerto Colombia.	September 7.....	No. 9776 ¹⁹	Pan American Airways	Miami via wayports.												
September 7.....	Tolon.....	Pan American Airways	Miami via wayports.	September 7.....	Calamares.....	United Fruit Co.....	New York via Habana.												
September 8.....	No. 9670 ¹⁹	United Fruit Co.....	New York via Habana.	September 7.....	Heredia.....	United Fruit Co.....	New Orleans via waypts.												
September 8.....	No. 9670 ¹⁹	Pan American Airways	San Salvador and waypts.	September 8.....	No. 945-M ¹⁹	Pan American-Grace Airways	Talara via wayports.												
September 8.....	Cundinamarca C-33 ¹⁹	Scadta Airplane Co.	Barranquilla and wayports	September 8.....	Iriana.....	United Fruit Co.....	Bocas and Limon.												
September 8.....	Carare.....	Elders & Fyffes, Ltd.	Avonmouth via wayports	September 9.....	Marques de Comillas.	Spanish Line.....	Barcelona and wayports.												
September 9.....	Beyra.....	Aluminum Line.....	Houston via wayports.	September 10.....	Tolosa.....	United Fruit Co.....	Port Limon, Costa Rica.												
September 10.....	Santa Marta.....	United Fruit Co.....	New York via Kingston.	September 10.....	Carare.....	Elders & Fyffes, Ltd.	San Salvador and waypts.												
September 10.....	Castilla.....	United Fruit Co.....	Miami via wayports.	September 10.....	No. 9685 ¹⁹	Pan American Airways	Miami via wayports.												
September 10.....	No. 142-M ¹⁹	Pan American Airways	San Salvador via waypts.	September 10.....	No. 9137 ¹⁹	Pan American Airways	Georgetown and wayports.												
September 10.....	No. 9664 ¹⁹	Royal Netherlands S. S. Co.	Amsterdam via waypts.	September 10.....	Beyra.....	Aluminum Line.....	Colon, Rep. of Panama.												
September 11.....	Hercules.....	Pan American Airways	New York via wayports.	September 11.....	Anachocua ²⁰	United Fruit Co.....	Colon, Rep. of Panama.												
September 11.....	Comedian.....	T. & J. Harrison	Liverpool via wayports.	September 11.....	Annetta I. ²⁰	Pan American Airways	Pt. Cabello and waypts.												
September 11.....	Anachocua ²⁰	United Fruit Co.....	Colon, Rep. of Panama.	September 11.....	Santa Marta.....	United Fruit Co.....	New York via wayports.												
September 11.....	Annetta I. ²⁰	A. Tagaropolos	Port Limon, Costa Rica.	September 11.....	Castilla.....	United Fruit Co.....	Puerto Colombia.												
September 12.....	Aucon.....	Panama R. R. S. S. Line	Port Limon, Costa Rica.	September 12.....	Hercules.....	Royal Netherlands S. S. Co.	Paramaribo.												
September 12.....	Iriana.....	United Fruit Co.....	Curacao, D. W. I.	September 12.....	Cundinamarca C-33 ¹⁹	Scadta Airplane Co.	Barranquilla.												
September 12.....	Camden.....	Standard Fruit & S. S. Co	New Orleans via Habana.	September 12.....	Iriana.....	United Fruit Co.....	New Orleans and waypts.												
September 12.....	Imperiana ²⁰	A. Tagaropolos	Colon, Rep. of Panama.	September 13.....	Bogota.....	Colombian S. S. Line.....	New Orleans and waypts.												
September 13.....	Nueva Espana ²⁰	E. Hawkins	Colon, Rep. of Panama.	September 13.....	Atlantida.....	Standard Fruit & S. S. Co.	New Orleans and waypts.												
September 13.....	Mary V. ²¹	E. Hawkins	Colon, Rep. of Panama.	September 13.....	Mary V. ²¹	Standard Fruit & S. S. Co.	New Orleans and waypts.												
September 13.....	Dora K. ²¹	A. L. Surgson	Colon, Rep. of Panama.	September 13.....	Camden.....	United Fruit Co.....	San Andres, Colombia.												
September 13.....	No. 144-M ¹⁹	Pan American Airways	Pt. Cabello and wayports	September 13.....	Dora K. ²²	A. L. Surgson	Curacao via wayports.												
September 13.....	No. 9776 ¹⁹	Pan American Airways	San Salvador and wayports	September 13.....	Inaparuna ²⁰	Inaparuna ²⁰	Bluefields and Pt. Limon.												
September 13.....	No. 9676 ¹⁹	Pan American Airways	Miami via wayports	September 13.....	Nueva Espana ²⁰	Nueva Espana ²⁰	Colon, Rep. of Panama.												
September 13.....	No. 300-N ²⁰	Pan American-Grace Airways	Talara via wayports	September 13.....	Cartago.....	Diez & Garcia.....	Colon, Rep. of Panama.												
September 13.....	Cartago.....	United Fruit Co.....	New Orleans via Habana.																

¹⁹ Air mail carrier.

²⁰ Motor boat.

²¹ Motor schooner.

²² Motor ship.

PORT OF BALBOA.

September 8.....	Cauca ²¹	National Navigation Co.....	Pto. Armuelles, Panama.	September 8.....	Cauca ²¹	National Navigation Co.....	Buenaventura, Colombia.
September 12.....	Nueva Panama ²¹	Haus Elliot.....	Panama Bay, R. P.....	September 9.....	Nueva Panama ²¹	Haus Elliot.....	Panama Bay, R. P.....

* Other than ships passing through the Canal.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, August, 1930.—Continued from page 87.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										SOUTH AMERICA.					AUSTRALASIA.					ASIA.				
	West coast of United States.	West coast of Canada.	West coast of Central America.	Balboa, C. Z.	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Ecuador.	Pern.	West coast of South America.	Total, South America.	Australia.	New Zealand.	Australasia.	Total, Australasia.	Philippine Islands.	China.	Japan.	Far East.	Total, Asia.	Grand total.	Per cent of total cargo.		
NORTH AMERICA:																									
UNITED STATES—																									
North Atlantic ports.....	169,515	174	474	1128,447	172,722	9,290	639	4113,788	3,977	18,155	13,792	4,782	9,490	13,457	18,617	15,805	57,869	266,800	39.3						
South Atlantic ports.....	9,300			5,306																					
Gulf ports.....	45,501			533	46,034	4,667	30	189	159	490	5,385	21,165	4,247	1,478	26,890	629	18,396	35,834	1,921	56,880	135,339	19.9			
Total, United States.....	214,322	174	474	1128,980	224,062	13,957	699	6003,947	4,467	23,670	34,957	9,029	1,478	45,464	10,385	32,069	56,800	18,741	117,995	411,191	60.5				
East coast of Canada.....	4,000	3,200			7,200																				
East coast of Central America.....	3,630	94	4,954		8,720	993	616	830	683	1,196	4,318	1													
Cristobal, C. Z.,.....	3,103	8,042	2,927		14,074																				
West Indies.....																									
Total, North America.....	225,057	11,510	5,428	3,087	8,980	254,062	23,740	1,315	5,936	4,630	5,669	41,290	42,006	12,964	63,648	10,385	32,069	56,800	18,741	117,995	476,995	70.2			
Europe:																									
British Isles.....	5,252	6,885	1,700		13,927	1,985				108	2,119	4,102	3,205	37,880	497	41,582									
Belgium.....	10,936	2,781	150	30	15,897	5,120	259	255	511	370	6,515														
Denmark.....	2,238	1,069	15		3,322	25		24		234	281														
France.....	7,200	1,069	15		8,322																				
Holland.....	12,870	5,974	343		18,511	3,308	1,143	268	1,293	46	6,148														
Italy.....	6,320	17			18,844	1,849	30	820	2,394	128	5,131														
Norway and Sweden.....	2,555	170	995	807	8,327	4,469		732	608	3	1,121	1,136													
Spain and Portugal.....	4,270	1,915	1,802		7,987	7,727				87	87														
Europe.....	59,581	25,588	4,760	1,180	84,118	19,473	1,432	2,149	5,054	24,682	82,790	4,304	37,890	1,981	44,265										
East coast of South America.....	9,963	2,440		25	12,428		93			13	106														
Africa.....																									
Grand total.....	237,601	30,533	10,197	2,928	9,980	350,608	43,213	2,910	8,085	9,684	30,364	94,186	46,400	50,851	10,659	107,913	10,385	32,121	65,453	18,741	126,700	679,407	100.0		
Per cent of total cargo:																									
August, 1930.....	42.4	5.8	1.5	0.6	1.3	51.6	6.4	0.4	1.2	1.4	4.5	13.9	6.8	7.5	1.6	15.9	1.5	4.7	9.6	2.8	18.6	100.0			
August, 1929.....	44.0	2.3	2.3	0.5	1.4	50.5	6.8	0.5	0.3	1.9	4.6	14.1	7.0	7.7	0.7	15.4	2.0	5.9	10.9	1.2	20.0	100.0			
August, 1928.....	40.4	1.8	3.0	0.2	1.0	46.4	6.3	1.0	0.8	1.9	3.6	13.6	8.0	5.3	1.3	13.6	2.1	5.3	11.3	5.7	24.4	100.0			

* General cargo not routed so as to allow segregation between definite ports.

† Includes local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, August, 1930.

(Figures represent tons of 2,240 pounds.)

From —	NORTH AMERICA.										EUROPE.										Grand total.	Per cent of total cargo.		
	UNITED STATES.					NORTH AMERICA.					EUROPE.					EUROPE.								
	North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total, United States.	East coast of Canada.	East coast of Central America.	Cristobal, C. Z.	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe, 1	Total, Europe.			East coast of South America.	Egypt.	Africa.
NORTH AMERICA:																								
West coast of U. S.	484,127	3,264	24,714	512,105	2,644	1,692	16,109	532,640	175,619	5,785	1,272	4,754	15,743	5,356	2,205	2,930	250	21,957	234,991	5,420	169	773,151	52.6	
West coast of Canada.	17,911		843	18,754	7,014		3,674	29,442	63,215	2,985	601	9,900	2,431	12,917	147	5,356	153	31,300	119,961	1,152	20	150,575	10.3	
W. coast of Cen. Amer.	57			57			916	402	1,375				156					7,577		7,733			9,108	0.6
Balboa, C. Z.	308			308				308															308	0.0
Hawaiian Islands.	8,571		14,570	23,141				23,141	960	159						190			1,318				24,459	1.7
Total, N. America.	510,974	3,264	40,127	554,365	7,014	2,644	2,608	20,275	586,906	239,803	8,770	1,491	6,654	18,303	2,352	8,476	7,377	51,257	363,913	6,572	210	957,601	65.2	
SOUTH AMERICA:																								
Chile.	165,056	4,593	2,087	171,736	1,283	539	1,627	175,235	21,511	1,714	4,280	2,156	789			547			42,600	72,215	121		247,571	16.9
Colombia.	883			883			939	1,872					1,872										1,872	0.1
Ecuador.	22,853			22,853			3,431	5,262	23	15	139	716	91		3	13	25		12	1,037	81		27,497	1.9
Peru.	21,558			21,558	2	251	15	59,556	14,488	400	193	122	1,534	2,320	9	2,950			16,846	38,912			98,468	6.7
W. coast of S. America.	28			28			1,660	1,688	2,966				114						75	3,155			4,843	0.3
Total, S. America.	210,378	4,593	2,087	217,058	37,730	1,285	6,920	1,647	264,640	38,988	2,129	197	3,065	4,570	3,200	12	3,510	25	59,623	115,319	292		380,101	25.9
AUSTRALASIA:																								
Australia.	13,690			13,690	1,560			15,250	501											501			15,751	1.1
New Zealand.	1,700			1,700	300		58	2,058	33,642											132	33,774		35,832	2.4
Australasia.	6,291			6,291				6,291	3,100											4,140	7,240		13,531	0.9
Total, Australasia.	21,681			21,681	1,860		58	23,599	37,243											4,272	41,515		65,114	4.4
ASIA:																								
Philippine Islands.	24,505		12,652	37,157				37,157															37,157	2.5
China.	3,262			3,262			677	3,939															3,939	0.3
Japan.	5,219			5,219			63	5,282															5,282	0.4
Far East.	3,916			3,916				13,862	17,778														17,778	1.2
Total, Asia.	36,902		12,652	49,554			740	13,862	64,156											2,030			66,186	4.5
Grand total.	779,935	7,857	54,806	842,658	46,604	3,929	10,326	85,784	939,301	318,064	10,899	1,688	9,719	23,400	21,503	2,364	11,986	8,002	115,152	522,777	6,774	210	1,469,062	100.0

Per cent of total cargo:

August, 1930.	53.1	0.5	3.7	57.3	3.2	0.3	0.7	2.4	63.9	21.7	0.7	0.1	0.7	1.6	1.5	0.2	0.8	0.5	7.8	35.6	0.5		100.0
August, 1929.	50.1	2.0	7.5	59.6	3.4	0.2	0.6	0.4	64.2	17.2	1.8	0.1	2.2	1.4	0.5	0.7	0.4	0.5	8.5	33.3	0.7	1.5	100.0
August, 1928.	49.6	1.1	2.4	53.1	4.1	0.5	1.3	1.1	60.1	22.5	0.8	0.1	0.6	2.5	1.9	0.5	0.6	0.1	9.6	39.2	0.3	0.4	100.0

* General cargo not routed so as to allow segregation between definite ports.

* Includes both local and transit cargo.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending September 6, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cerigo	North German Lloyd		August 31		99
Cristobal	Panama R. R. S. S. Line		August 31		809
Acajutla	Pacific Steam Navigation Co.		September 6		739
Santa Maria	Grace Line		August 31		191
Parismina	United Fruit Co.		August 31		3
Peter Kerr	States S. S. Line		August 31		(²)
Ulua	United Fruit Co.	August 31	August 31	17	102
Amasis	Hamburg-American Line	August 31	August 31	29	64
Caldas	United Fruit Co.	September 1		(¹)	
Santa Elisa	Grace Line	September 1	September 1	286	(²)
Darian	Leyland Line	September 1	September 2	340	(²)
Calamares	United Fruit Co.	September 1	September 3	399	54
Cauca	United Fruit Co.	September 1	September 3	(¹)	315
Simon Bolivar	Royal Netherlands S. S. Co.	September 1	September 3	12	2
C. C. Acme	M. Newball	September 1	September 3	15	6
Schwaben	North German Lloyd	September 2	September 2	13	169
Boskoop	Royal Netherlands S. S. Co.	September 2	September 3	271	194
Durazzo	Hamburg-American Line	September 3		634	
Aconcagua	Chilean Line	September 3	September 3	17	(²)
Orinoco	Hamburg-American Line	September 3	September 3	125	(²)
George Washington	Fred Olsen & Co.	September 3	September 3	(¹)	102
Swiftwind	C. D. Mallory & Co.	September 3	September 3	11,910	(²)
Zacapa	United Fruit Co.	September 3	September 3	548	57
Macoris	French Line	September 3	September 4	108	598
Santa Clara	Grace Line	September 3	September 4	128	99
Iriona	United Fruit Co.	September 3	September 4	588	104
Tela	United Fruit Co.	September 3	September 6	6	140
Amerika	United Fruit Co.	September 4	September 4	6	(²)
Pearl Marie	R. Feuillebois	September 4	September 4	(¹)	40
Baracoa	United Fruit Co.	September 4	September 5	1	168
Bennekom	Royal Netherlands S. S. Co.	September 4	September 5	891	202
Oroya	Pacific Steam Navigation Co.	September 4	September 5	95	89
Arana	Pacific Steam Navigation Co.	September 4	September 5	27	66
Iowa	French Line	September 5	September 5	619	(²)
Simon Bolivar	Royal Netherlands S. S. Co.	September 5	September 6	6	529
Moerdyk	Pacific Steam Navigation Co.	September 5	September 6	239	283
Dintledyk	Pacific Steam Navigation Co.	September 5	September 6	67	(²)
Amapala	Standard Fruit Co.	September 5	September 6	44	365
Guayaquil	Panama R. R. S. S. Line	September 6		1,367	
Heredia	United Fruit Co.	September 6		344	
Santa Tecla	N. O. & S. A. S. S. Co.	September 6		103	
Marques de Comillas	Spanish Line	September 6		126	
San Francisco	Hamburg-American Line	September 6		29	
Ruhr	Hamburg-American Line	September 6		316	
Liberator	Tampa Intercocean Co.	September 6		179	

¹ No cargo discharged.

² No cargo laded.

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1930 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
Cristobal	September 16	September 21	September 24	September 28	October 1	October 6
Ancon ²	September 30	October 5	October 8	October 12	October 15	October 20
Cristobal	October 13	October 20	October 23	October 28	October 31	November 5
Ancon	October 28	November 2	November 5	November 9	November 12	November 17
Cristobal	November 11	November 16	November 19	November 23	November 26	December 1
Ancon	November 25	November 30	December 3	December 7	December 10	December 15
Cristobal	December 9	December 14	December 17	December 21	December 24	December 29
Ancon	December 23	December 28	December 31	January 4	January 7	January 12

¹ Effective April 30, steamers sail daylight saving time.

² Due to discontinuance of the daylight saving time, departure after S. S. *Cristobal*, Sept. 16th, will be at 4 p. m., standard time.

Steamers sail at 4 p. m. from pier 65, North River, Foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors.

The rates are as follows:

(a) For handling cargo from ship's side to storage place, \$1 per ton of 2,000 pounds or 40 cubic feet on general merchandise, and one-half of the transfer rates provided by Item 34, Panama Canal Tariff No. 10, on other commodities.

(b) For handling cargo from storage place to ship's side, *i. e.*, for delivering or reforwarding it, the same rates as for receiving and storing, as per (a), above. The minimum charge for handling any shipment taken out of storage is \$1.

(c) For storage: First 35 days free; thereafter, 3 cents per day or fraction thereof per ton of 2,000 pounds or $1\frac{1}{2}$ cents per day or fraction thereof per ton of 40 cubic feet.

Special rates on special commodities in large quantities may be obtained on request.

Various lines operating out of Cristobal and Balboa to the west coast of Central and South America will accept their proportion of the through rate for the haul beyond the Isthmus, as explained in the following paragraph:

By virtue of the Canal Zone for Orders arrangement shippers are enabled to consign cargo to the Isthmus and subsequently to reassign it to any port beyond the Isthmus to which there is a through rate from port of origin without sacrificing their right to the through freight rate. This means that when a shipment moves from, say, New York to the Canal Zone, usual local rates will be charged to Cristobal or Balboa, as the case may be; but should the owner wish to reforward to any other port to which there is a through rate from port of origin, he may do so upon payment of the receiving carrier's proportion of the through rate from port of origin to port of ultimate destination, and upon evidence that the shipment, or any part of it, has moved beyond the Isthmus, the initial carrier will refund the difference between its proportion of the through rate applicable and the local rate.

In addition to reassigning beyond the Isthmus, cargo billed Cristobal for Orders may be reassigned to Panama City or line points on the Panama Railroad on the basis of through rates from port of origin to Panama City. In this case the Panama Railroad Company's charges will be the difference between the rate charged to Cristobal by the ocean carrier and the through rate from port of origin to Panama City, and the necessary adjustments with the ocean carrier will be made by the Panama Railroad Company without inconvenience to shippers or consignees. The handling charge from storage place to cars is the same as from storage place to ship's side.

Cargo deposited in Hold for Orders Warehouse, Cristobal, which consignees desire transferred to Hold for Orders Warehouse, Balboa, will be assessed a charge of \$1 per ton on general cargo and one-half the transfer rates on other commodities for handling from the warehouse into cars at Cristobal, and a second charge of the same kind for handling from cars into warehouse at Balboa. The same charge will again apply when the cargo is reforwarded from, or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on Hold for Orders cargo discharged from vessels at Balboa.

Cargo consigned to Hold for Orders, Balboa, arriving at Cristobal piers, and/or cargo consigned to Hold for Orders, Cristobal, on which by previous arrangement the destination has been changed to Hold for Orders, Balboa, prior to arrival of the vessel, will be assessed one handling charge of \$1 per ton on general cargo or one-half of the transfer rates on other commodities for handling from shipside across piers and into cars at Cristobal and from cars into the Hold for Orders Warehouse, Balboa. The same charge will apply when the cargo is reforwarded from or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on cargo moving in the opposite direction.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," will be supplied on request to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective August 20, 1930.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb	\$0.24
Brass, sheet, average.....	Lb.	.21
Bronze, Tobin, average.....	Lb.	.24
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.12
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Coal.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$8 per ton of 2,240 pounds at Cristobal, and \$11 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

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CANAL WORK IN AUGUST, 1930.

The following is the report of the Acting Governor to the Secretary of War, of Canal work in the month of August, 1930.

BALBOA HEIGHTS, C. Z., September 18, 1930.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of August, 1930:

NUMBER OF TRANSITS.

During the month, 465 commercial vessels and 19 small nonseagoing launches measuring under 20 tons transited the Canal. In addition to these there were 41 vessels belonging to the United States Government and 1 transit of a Panamanian Government vessel, on which no tolls were collected, making a total of 526 transits for the month, or a daily average of 16.97.

Tolls on the 465 commercial vessels amounted to \$2,080,230.42, and on the launches to \$111.00, a total of \$2,080,341.42, or a daily average on all traffic of \$67,107.79.

The decline in volume of commercial traffic continues. Traffic for the past month as compared with July, 1930, shows a decrease of 23 transits and \$100,281.40 in tolls, and in comparison with the traffic in August, 1929, a decrease of 76 transits and \$247,207.44 in tolls. Traffic in the first 8 months of the current calendar year has fallen off to the extent of 360 transits, \$842,103.82 in tolls, and 2,148,637 in tons of cargo as compared with the corresponding period last year; the percentages of decrease have been: Transits, 8.4; tolls, 4.6; cargo, 10.2 per cent.

The total numbers of craft of all kinds transiting the Canal during the month of August, 1930, as compared with the same month in 1929 and 1928, are shown in the following tabulation:

	August, 1928.	August, 1929.	August, 1930.
Commercial vessels.....	526	541	465
Launches (under 20 tons).....	6	6	19
Noncommercial vessels:			
United States Government.....	24	28	41
Panamanian Government.....		1	1
Colombian Government.....	1		
Vessels for repairs.....	6	4	
Total.....	563	580	526

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun.....	4	5	9
Pedro Miguel.....	15	15	30
Miraflores.....	15	18	33
Total.....	34	38	72

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the calendar year 1930 to the end of August, 1930, as compared with the same months in the previous year.

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929.	1930.	1929.	1930.	1929.	1930.	1929.	1930.
January...	603	531	2,771,280	2,601,628	2,858,835	2,611,632	\$2,502,815.12	\$2,360,211.24
February...	522	491	2,423,530	2,369,255	2,550,498	2,377,900	2,211,961.20	2,131,386.12
March...	536	515	2,567,961	2,505,859	2,743,768	2,658,238	2,343,865.55	2,260,002.36
April...	540	489	2,488,176	2,479,096	2,719,668	2,456,782	2,281,087.27	2,232,763.00
May...	524	479	2,496,905	2,418,633	2,536,839	2,261,616	2,296,546.57	2,162,898.60
June...	503	478	2,352,431	2,358,237	2,424,002	2,147,181	2,127,805.97	2,100,994.53
July...	527	488	2,468,230	2,438,895	2,598,162	2,402,047	2,259,582.37	2,180,511.82
August...	541	465	2,558,739	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
Total...	4,296	3,936	20,132,302	19,517,176	21,112,502	18,963,865	18,351,101.91	17,508,998.09

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these Governments and vessels transiting solely for repairs, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for August in the years 1928, 1929, and 1930, and comparison with the monthly averages for the fiscal year 1930:

	August, 1928.	August, 1929.	August, 1930.	Average per month for fiscal year 1930.
Number of vessels.....	526	541	465	515
Panama Canal net tonnage.....	2,437,246	2,558,739	2,345,573	2,498,385
United States net tonnage.....	1,856,567	1,943,876	1,751,764	1,890,255
Registered gross tonnage.....	3,057,243	3,195,903	2,911,378	3,119,221
Registered net tonnage.....	1,870,211	1,952,479	1,770,645	1,899,802
Tolls.....	\$2,199,069.31	\$2,327,437.86	\$2,080,230.42	\$2,256,407.50
Tons of cargo.....	2,425,336	2,680,730	2,148,469	2,502,519

The average daily number of transits, tonnage, tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for fiscal year 1930.
	August, 1928.	August, 1929.	August, 1930.	
Number of transits.....	16.97	17.45	15.00	16.95
Panama Canal net tonnage.....	78,621	82,540	75,664	82,139
Tolls.....	\$70,937.72	\$75,078.64	\$67,104.21	\$74,183.26
Tons of cargo carried.....	78,236	86,475	69,305	82,275

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of August in 1928, 1929, and 1930 are shown in the following tabulation:

	Average per vessel.		
	August, 1928.	August, 1929.	August, 1930.
Panama Canal net tonnage.....	4,633	4,730	5,044
United States net tonnage.....	3,530	3,593	3,767
Registered gross tonnage.....	5,812	5,907	6,261
Registered net tonnage.....	3,555	3,609	3,808
Tolls.....	\$4,180.74	\$4,302.10	\$4,473.61
Tons of cargo (including vessels in ballast).....	4,611	4,955	6,620
Tons of cargo (laden vessels only).....	5,525	5,802	5,344

NATIONALITY OF VESSELS.

Fifteen nationalities were represented in the commercial traffic passing through the Canal in August, 1930. Vessels with United States registry, with 214, led in the number of transits, while those of British registry, with 107, were second; vessels of these two nationalities made 69.0 per cent of the total transits for the month. Germany and Norway were next with 34 transits each.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo carried through the Canal during the month of August, 1930, was 2,148,469 tons. Cargo from the Atlantic to the Pacific aggregated 679,407 tons, as

compared with 575,964 tons in July, 1930, and 858,661 tons in August, 1929. From the Pacific to Atlantic there were 1,469,062 tons, as compared with 1,826,083 tons in July, 1930, and 1,822,069 tons in August, 1929.

From the Atlantic to Pacific various manufactured goods, totaling 182,763 tons, constituted the heaviest item of traffic, followed by mineral oils with 61,781 tons, phosphates with 36,437 tons, sulphur with 34,120 tons, and cement with 25,189 tons. There was a decrease of 179,254 tons of cargo, or 20.9 per cent, in this direction as compared with August, 1929, caused by a general curtailment in shipments of practically all commodities, but principally manufactured iron and steel, which declined 84,226 tons, or 39.5 per cent.

From the Pacific to Atlantic, mineral oil shipments totaling 460,879 tons, were the heaviest item, followed by lumber with 194,150 tons, ores (principally iron) with 173,096 tons, wheat with 142,044 tons, nitrates with 66,917 tons, and sugar with 63,513 tons. There was a decrease of 353,007 tons of cargo, or 19.4 per cent, in this direction, as compared with August, 1929. Mineral oil shipments declined 93,958 tons, or 16.9 per cent; lumber, 177,648 tons, or 47.8 per cent; and nitrates, 97,366 tons, or 59.3 per cent. Wheat increased 47,212 tons, or 49.8 per cent, in comparison with the same month in the preceding year.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.916 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.72 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of August, 1930, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$14,406.25	\$13,109.00		\$1,297.25
British.....	520,901.61	565,395.60	\$44,493.99	
Chilean.....	12,915.00	14,049.00	1,134.00	
Colombian.....	1,067.30	900.00		167.30
Danish.....	35,006.09	34,691.20		314.89
Danzig.....	17,984.45	18,080.00	95.55	
Dutch.....	44,310.00	54,796.00	10,486.00	
French.....	43,844.75	50,366.20	6,521.45	
German.....	102,784.10	113,197.00	10,412.90	
Italian.....	25,813.75	29,367.00	3,553.25	
Japanese.....	70,327.85	68,123.00		2,204.85
Norwegian.....	135,620.18	154,431.40	18,811.22	
Panamanian.....	3,044.20	4,209.00		835.20
Swedish.....	41,108.08	48,376.40	7,768.32	
United States.....	1,009,096.81	1,037,863.80	28,766.99	
Total.....	2,080,230.42	2,207,454.60	132,043.67	4,819.49
Net increase for all traffic.....		127,224.18	127,224.18	

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$20,767.89
United States foreign trade.....	9,817.70
United States—Canal Zone trade.....	1,818.60
Net increase.....	28,766.99

¹ Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement of vessels transiting the Panama Canal in August, 1930, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....	1.04	1.69	1.45
British.....	.70	1.27	.99
Chilean.....	.34	.39	.36
Colombian.....	1.55	.80	1.17
Danish.....	.74	1.74	1.27
Danzig.....	.....	1.70	1.70
Dutch.....	.53	1.19	.89
French.....	.35	1.38	.83
German.....	.63	1.40	1.00
Italian.....	.30	1.37	.51
Japanese.....	.94	1.21	1.10
Norwegian.....	1.07	1.47	1.27
Panamanian.....	1.24	.....	1.24
Swedish.....	.84	1.96	1.50
United States.....	.76	1.38	1.12
Averages, August, 1930.....	.73	1.37	1.07
Averages, August ¹ , 1929.....	.85	1.48	1.20
Averages, August ¹ , 1928.....	.85	1.45	1.18

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of August is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	6	27,240	\$28,276.25	44	244,744	\$250,683.90
Ballast.....	43	246,750	177,682.86	2	7,370	5,306.40
General cargo ships:						
Laden.....	179	901,080	796,458.05	171	827,099	755,930.00
Ballast.....	15	82,783	59,707.41	2	8,065	5,806.80
Noncargo-carrying ships:						
Yachts.....	1	328	245.25	2	114	133.50
Total.....	244	1,258,181	1,062,369.82	221	1,087,392	1,017,860.60
Method of propulsion:						
Steam.....	169	852,497	747,048.34	160	768,240	725,778.34
Motor.....	75	405,684	315,321.48	60	319,097	292,016.26
Motor schooner.....	.....	.....	.....	1	55	66.00
Total.....	244	1,258,181	1,062,369.82	221	1,087,392	1,017,860.60

Of the 329 steam-driven vessels, 262 were oil burning, 63 coal burning, and 4 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of August, 1930. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Ammunition ships	1	¹ 10,600	\$5,300.00			
Cruisers	1	¹ 8,900	4,450.00	2	¹ 11,644	\$5,832.00
Gunboats				1	¹ 1,575	787.50
Launches	3	² 15	10.80			
Submarines	6	¹ 5,168	2,584.00	5	¹ 4,292	2,146.00
Supply ships	1	³ 3,434	4,292.50			
Survey ships	1	¹ 2,600	1,300.00	1	¹ 2,600	1,300.00
Transports	1	³ 3,992	4,990.00	1	³ 3,992	4,990.00
Tugs	2	¹ 2,000	1,000.00	2	¹ 2,000	1,000.00
U. S. Army vessels:						
Ferry boats	1	³ 191	143.25			
Mineplanters	1	¹ 1,208	604.00	2	¹ 2,416	1,208.00
Transports	5	³ 20,941	26,176.25	3	³ 13,580	16,975.00
U. S. Treasury vessels:						
Cutters				1	¹ 1,181	590.50
Total, U. S. Government	23		50,850.80	18		34,829.00
Panamanian Government vessels:						
Transports				1	² 101	72.72
Grand total	23		50,850.80	19		34,901.72

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of August, 1930, carried cargo as follows: Atlantic to Pacific, 7,270 tons, Pacific to Atlantic, 1,638 tons; total, 8,908 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of August, 1930. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific	12	90	\$74.25
Pacific to Atlantic	7	46	36.75
Total	19	136	111.00

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of August, 1930, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving	71,619	50,557	122,176
Local cargo shipped	11,164	726	11,890
Transit cargo arriving	2,193,991	2,194,000	4,387,991
Transit cargo clearing	2,214,545	2,211,399	4,425,944
Cargo received for transshipment	21,498	1,139	22,637
Cargo transhipped	22,976	987	23,963
"Canal Zone for Orders" cargo:			
Number of receipts issued	104	37	141
Number of withdrawals	648	215	863
Tons received	1,545	235	1,780
Tons withdrawn	1,898	161	2,059
Packages received	7,823	2,258	10,081
Packages withdrawn	7,388	1,933	9,321
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company	40	3	43
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company	10,340	781	11,121
Coa issued, miscellaneous:			
Panama Canal departments	35	4	39
U. S. Army, including vessels	9		9
Individuals and companies	19		19
Transferred to Navy	785		785
Total sales and issues	11,188	785	11,973

		Cristobal.	Balboa.	Total.
Coal on hand, August 1, 1930	tons	104,533		104,533
Coal on hand, September 1, 1930	tons	93,345		93,345
Coal received during month	tons			
Coal received from Navy	tons		785	785
Fuel oil issued from Panama Canal tanks:				
Panama Canal departments	bbls.	7,460.13	16,329.26	23,789.39
Panama Railroad Company	bbls.	150.00	103.64	253.64
U. S. Army and Navy	bbls.	526.00	145.57	671.57
Individuals and companies	bbls.		362.95	362.95
Total sales and issues	bbls.	8,136.13	16,941.42	25,077.55
Inventory adjustment	bbls.	¹ 406.01	² 301.15	¹ 104.86
Fuel oil on hand September 1, 1930	bbls.	58,526.84	88,977.80	147,504.64
Diesel oil sold during August, 1930	bbls.		3,523.18	3,523.18
Inventory shortage	bbls.		8.74	8.74
Diesel oil on hand September 1, 1930	bbls.	1,082.50	14,604.97	15,687.47
Miscellaneous transfers	bbls.	447.41	10,276.35	10,723.76
Gasoline and kerosene pumped for The Panama Canal	bbls.	12,477.16	29,276.51	41,753.67
Gasoline pumped for individuals and companies	bbls.	893.77	6,740.55	7,634.32
Oil pumped for individuals and companies:				
Receipts	bbls.	315,668.76	292,032.56	607,701.32
Issues	bbls.	230,530.90	282,189.06	512,719.96
Oil pumped for U. S. Navy	bbls.	8,801.00	4,202.00	13,003.00
Total fuel oil, gasoline, and kerosene handled	bbls.	576,955.13	645,181.63	1,222,136.76
Admeasurement of vessels:				
U. S. equivalent certificates issued		14	3	17
Measured for Panama Canal net tonnage		3	1	4
Re-measured for Panama Canal net tonnage		12	3	15
Panama Canal net tonnage corrected		3	6	9
U. S. equivalent tonnage corrected		6	12	18
Services of harbor equipment:				
Tugs, total operating hours		340 ¹ / ₂	270 ¹ / ₂	610 ¹ / ₂
Launches, total operating hours		1,317 ¹ / ₂	1,530 ¹ / ₂	2,848
Revenue from tug service, pilotage, etc.:				
Tug revenue		\$11,198.00	\$9,283.75	\$20,481.75
Pilotage		18,024.00	8,790.00	26,814.00
Seamen		11,664.00	10,368.00	22,032.00
Launch service		1,809.00	3,173.00	4,982.00
Wharfage		15,377.14	6,553.34	21,930.48
Ships measured		75.00	50.00	125.00
Miscellaneous		508.51	283.00	791.51
Ships repaired at Panama Canal shops:				
Commercial		41	11	52
U. S. Army and Navy		5	3	8
Panama Canal equipment		6	9	15
Total		52	23	75
Vessels dry docked:				
Commercial		3	5	8
U. S. Army and Navy			1	1
Panama Canal equipment			2	2
Total		3	8	11
Clearances issued		281	261	542
Bills of health issued		294	262	556

¹ Shortage.² Overage.

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal	538	3,364,834	2,036,085	500	3,071,088	1,869,627
Vessels entering port but not transiting Canal	72	337,758	200,330	14	53,321	33,047
Vessels transiting Canal and handling passengers and cargo at terminal ports	118	721,947	431,846	109	722,020	424,237
<i>Ships clearing.</i>						
All vessels, including those transiting Canal	551	3,434,947	2,078,160	501	3,089,234	1,876,630
Vessels clearing port but not transiting Canal	76	351,427	209,879	14	53,321	33,047
Vessels transiting Canal and handling passengers and cargo at terminal ports	125	750,026	448,136	109	722,079	424,318

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports	1,318	943	2,261	138	567	705
From Pacific ports	173	90	263	213	141	354
Total disembarking	1,491	1,033	2,524	351	708	1,059
Embarking:						
For Atlantic ports	1,337	993	2,330	129	227	356
For Pacific ports	202	168	370	288	399	687
Total embarking	1,539	1,161	2,700	417	626	1,043
Remaining on board:						
From Atlantic to Pacific ports	2,090	4,376	6,466	1,974	3,523	5,497
From Pacific to Atlantic ports	1,590	1,454	3,044	1,867	1,386	3,253
From Atlantic to Atlantic ports	723	213	936			
From Pacific to Pacific ports				19	154	173
Total remaining on board	4,403	6,043	10,446	3,860	5,063	8,923
Total arriving	5,894	7,076	12,970	4,211	5,771	9,982
Total departing	5,942	7,204	13,146	4,277	5,689	9,966

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific	244	62	25.5
Pacific to Atlantic	221	56	25.3
Total	465	118	25.4

In addition to the aforesaid, 61 passenger-carrying vessels called at the port of Cristobal and 5 at Balboa without transiting the Canal, making a total of 123 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of August, 1930, 40 commercial airplanes entered and 42 cleared at the port of Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of August, 1930:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels	\$2,458.20	\$12,244.82	\$29,258.93	\$377.18	\$7,047.53	\$51,386.66
Government vessels	213.25	1,424.53	7,533.35	69.04	1,447.08	10,687.25
P. R. R. vessels	4.00	283.75	1,362.64	1,149.65	233.22	3,033.26
Total sales, August, 1930.	2,675.45	13,953.10	38,154.92	1,595.87	8,727.83	65,107.17
Total sales, August, 1929.	3,764.69	16,729.36	51,507.08	1,130.07	9,657.48	82,788.68
Total sales, August, 1928.	3,357.34	13,465.26	38,033.07	1,160.09	6,884.06	62,899.82
Sales at Balboa to:						
Commercial vessels	848.75	2,982.43	13,690.05	676.83	13,414.51	31,612.57
Government vessels	376.00	1,991.03	12,616.62	686.33	1,458.33	17,128.81
P. R. R. vessels				33.09		33.09
Total sales, August, 1930.	1,224.75	4,973.46	26,306.67	1,396.25	14,873.34	48,774.47
Total sales, August, 1929.	1,276.02	11,172.78	21,727.06	1,513.72	5,087.64	40,777.22
Total sales, August, 1928.	2,170.09	19,971.90	28,848.44	741.57	5,528.07	57,260.07

The aggregate sales to Government vessels during the month was \$27,816.06; to Panama Railroad vessels, \$3,066.35; and to other commercial vessels, \$82,999.23, making the total sales to all vessels, \$113,881.64. The figures shown are subject to minor changes on final audit.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of August, 1930, as compared with the corresponding month in 1928 and 1929:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. †			Aug., 1928.	Aug., 1929.	Aug., 1930.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	216	230	446	11	13	24	515	516	470
Pedro Miguel.....	216	242	458	14	23	37	535	559	495
Miraflores.....	216	240	456	13	21	34	536	550	490
	Number of vessels put through locks.								
Gatun.....	223	244	467	30	39	69	587	593	536
Pedro Miguel.....	221	245	466	40	48	88	615	661	554
Miraflores.....	221	245	466	40	47	87	616	660	553

† Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	45	45	45
Panama Canal equipment.....	9	30	33
Panamanian Government vessels.....	1	1	1
Launches.....	14	12	8

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in August, 1930, as compared with the preceding month and the corresponding month in 1929:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	1,881,540,000	1,475,200,000	1,431,080,000
Leakage.....	40,000,000	13,000,000	20,000,000
Maintenance.....	3,340,000		
Total, August, 1930.....	1,924,880,000	1,488,200,000	1,451,080,000
Total, July, 1930.....	1,948,350,000	1,544,100,000	1,506,700,000
Total, August, 1929.....	2,117,870,000	1,707,630,000	1,651,350,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of August, 1930, are shown in comparative form, in the following tabulation:

	August.		August—Years of record.		
	1929.	1930.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Discharge of Chagres River at Alhajuela.....	3,306	1,807	4,724	1,579	2,996
Maximum momentary discharge for the month.....	23,180	6,960	36,100		
Gatun Lake watershed, total yield.....	8,559	4,901	11,656	4,901	8,087
Gatun Lake watershed, net yield.....	8,111	4,303	11,089	4,303	7,552
Draft on Gatun Lake for lockages and power.....	2,968	2,791	2,968	1,390	2,324

¹ August 21, 1911.

² August, 1914, not included.

³ Full power.

The discharge of the Chagres River at Alhajuela was 40 per cent below the 29-year average, or 1,807 c. f. s., compared with an average of 2,996 c. f. s. The maximum momentary discharge for the month was 6,960 c. f. s. at elevation 95.88 feet on the

21st. The minimum discharge was 914 c. f. s. at elevation 92.14 feet on the 12th. The minimum mean monthly discharge on record for the month of August is 4,724 c. f. s. in 1917, and the minimum 1,579 c. f. s. in 1904. The maximum momentary discharge on record for August is 36,100 c. f. s. at elevation 103.50 feet on August 21, 1911.

The total yield of the Gatun Lake watershed for August was 4,901 c. f. s., the lowest during the 17 years of record, and was 39 per cent below the 17-year average for August of 8,087 c. f. s. The maximum total yield of record for August is 11,656 c. f. s. in 1917. The lake varied in elevation from 83.91 feet on the 13th to a maximum of 85.12 feet on the 31st, averaged 84.50 feet, and ended at elevation 85.08 feet, showing a net rise during the month of 0.79 foot.

Miraflores Lake varied between elevations 53.12 feet on the 31st and 54.50 feet also on the 31st, averaged 53.87 feet, and ended at elevation 53.31 feet.

SEISMOLOGY.

One seismic disturbance was recorded during the month, on the 29th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,329,700 kilowatt hours, and the computed water consumption was 4,115,764,815 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 6,800 kilowatt hours, and the fuel oil consumption was 25.75 barrels. The station was operated only for peak-load service during the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 37 vessels during the month. There were 402 work orders issued during the month, as compared with 421 issued during the previous month.

MECHANICAL DIVISION.

During the month of August, 1930, miscellaneous repairs were made on 52 vessels at Cristobal and 23 at Balboa. Three vessels were dry docked at Cristobal and 8 at Balboa. Work was completed and carried forward on several pieces of equipment of The Panama Canal, the United States Army and Navy, and commercial steamship lines.

MUNICIPAL ENGINEERING DIVISION.

Six hundred and ninety-three square yards of concrete pavement was laid at France Field and 850 square yards at Silver City Commissary, Mt. Hope. Improvements around new buildings at Naval Air Station, Coco Solo, included 950 square yards of reinforced concrete pavement.

On the Thatcher Highway the erection of Camp No. 1 was completed except for electric wiring. One and three-quarter miles of rough clearing was done and 7,830 cubic yards of material excavated. The temporary ferry was operated during the month.

Work on several improvement projects in the cities of Colon and Panama, and in the Canal Zone, was carried on.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 752,228,500 gallons.

DREDGING DIVISION.

The Southwest La Pita slide showed a slight surface movement during the month. The break on the West Lirio slide between stations 1735-00 and 1740-00 W., became active on the 25th, and now extends 400 feet back from the west prism line and about 100 feet above the lake level. There was a depth of 30 feet on the west prism line at station 1740-00 and a depth of 38 feet, 55 feet east of the west prism line at station 1737-60. A slight settlement of this slide at the water's edge also took place between stations 1723-00 and 1725-00 W. The dipper dredge *Paraiso* worked 12½ days on this slide and excavated 47,900 cubic yards of material. The total excavation from this slide to August 31, 1930, amounts to 2,336,270 cubic yards. The general movement of the West Culebra slide along the waterfront continued throughout the month with an average movement of 1.1 feet toward the Canal between stations 1773-00 and 1794-00 W., and 0.7 foot southward between stations 1770-00 and 1778-00 W. Some new breaks developed on the south slope of Zion Hill. The banks around the Lirio run-off culvert at the East Barge Repair slide continued to break down during the

month and the soft material carried to the Canal caused a slight shoaling on the east prism line between stations 1747-00 and 1749-00. A few other bank breaks occurred during the month. There was no interference with shipping on account of slides.

A total of 122,000 cubic yards of sand, gravel, and silt was taken from Folks River borrow pit by suction dredge No. 86, and conveyed by pipe line 4,303 feet to the France Field fill. The dredge worked on a three-watch basis the entire month in the area, with the relay pump barge relaying the material to France Field, except for the last 2½ days of the month, when the dredge operated without the assistance of the relay pump barge, through an average pipeline length of 2,805 feet. Approximately 31 acres, or 83 per cent, of the area of the fill have been completed. A total of 250,500 cubic yards of material has been removed from the borrow pit, of which 186,400 cubic yards remained on the field, giving a run-off of approximately 25 per cent.

The total excavation during August, 1930, was 737,150 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
	<i>Cubic yds.</i>	<i>Cubic yds.</i>	<i>Cubic yds.</i>
Work excavation:			
Gaillard Cut—			
West Whitehouse slide	200	2,000	2,200
Southwest La Pita slide	550	4,850	5,400
Project No. 3	8,200	32,900	41,100
West Lirio slide	15,350	32,550	47,900
Maintenance	3,450	5,200	8,650
Pacific Entrance—			
Project No. 1	36,009	269,150	305,150
Maintenance	202,650	.....	202,650
Plant excavation:			
Dredging sand at Chame	2,100	.....	2,100
France Field	122,000	.....	122,000
Total	390,500	346,650	737,150

The ferry crossing at the north end of Pedro Miguel lock operated 31 days during the month. One thousand three hundred and sixty-four trips were made, and 156 Panama Canal, 56 U. S. Army, and 4,745 other vehicles, a total of 4,957, were ferried across the Canal.

MADDEN DAM PROJECT.

Studies were made of new arrangements of head works, intakes and power house to be located on the right bank of the dam site. Computations and engineering drawings of the transmission line towers were completed. Base maps for layout for dam sites 1, 5, 6, and Dike Ridge were started and the location of igneous rock quarry on Madden Road was mapped. Computations and engineering drawings of transmission towers were completed. Mapping of the 48.4 acres between the Rio Chilibrillo and Quebrada Moja Polla adjacent to the down stream side of the Madden Road, and an area of 8.0 acres on the right bank of the Rio Chilibrillo and the upper-water stage register, was completed. The precise level circuit comprising 16 saddle bench marks, in pairs, and 5 other bench marks, was finished. Seven weirs on the Madronal Ridge were completed, and weir construction in this area was finished. Four weirs were under construction in the Chilibrillo area. Earth dam investigations were continued, at Camp No. 4 a trench was dug and 6 borrow pits on the Azote Caballo-Chilibre Ridge were excavated for the purpose of securing bulk and volumetric material for analysis. Work was completed in sink hole No. 1 and one joint channel in sink hole No. 20. The total sink-hole excavation for the month amounted to 483 linear feet. Three hundred and forty-six feet of drilling of all types was performed during the month.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on August 31, 1930, was 23,093, composed of 7,842 Americans, 2,830 of whom were men, 2,330 women, and 2,682 children; 184 Europeans, 82 of whom were men, 30 women, and 72 children; 15,067 West Indians, 4,203 of whom were men, 2,699 women, and 8,165 children. The total number of persons in quarters on August 31, 1929, was 21,993.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of August 20, 1930, with a comparison of the working force for the preceding month and for August, 1929:

	Total employees.		As of August 20, 1930.		
	August, 1929.	July, 1930.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	108	129	58	69	127
Electrical.....	333	331	158	179	337
Municipal Engineering.....	1,657	1,071	100	1,005	1,105
Lock Operation.....	955	952	241	701	942
Dredging.....	1,251	1,211	198	970	1,168
Madden Project.....		296	26	262	288
Mechanical.....	1,473	1,380	502	900	1,402
Marine.....	834	788	202	564	766
Fortifications.....	334	177	23	155	178
Total.....	6,945	6,335	1,508	4,805	6,313
Supply Department:					
Quartermaster.....	2,212	2,211	220	1,866	2,086
Commissary.....	1,522	1,560	237	1,342	1,579
Cattle Industry—Plantations.....	179	96	2	92	94
Hotel Tivoli.....	109	115	8	104	112
Hotel Washington.....	105	104	9	94	103
Transportation.....	284	328	79	250	329
Total.....	4,411	4,414	555	3,748	4,303
Accounting Department.....	211	209	6	204	210
Health Department.....	1,144	1,152	296	863	1,159
Executive Department.....	837	858	525	336	861
Total.....	2,192	2,219	827	1,403	2,230
Panama Railroad Company:					
Superintendent.....	350	302	50	255	305
Transportation.....	184	186	65	124	189
Receiving and Forwarding Agency.....	1,322	1,107	87	1,219	1,306
Coaling Stations.....	279	226	43	236	279
Total.....	2,135	1,821	245	1,834	2,079
Grand total, August, 1929.....	15,683				
Grand total, July, 1930.....		14,789			
Grand total, August, 1930.....					14,925

Additions to the gold force on the Isthmus in August were as follows: Employed in the United States, 8; reemployed in the United States, 2; employed on the Isthmus, 9; reemployed on the Isthmus, 6; total, 25. Separations from the gold force totaled 45, as follows: Resigned, 19; discharged, 16; retired, 10; died, 0. At the end of the month there were on file 610 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 192 deaths occurred during the month of August, 1930, among the population of the Canal Zone, and the cities of Panama and Colon (143,636 population) which is equivalent to an annual death rate of 16.04 per 1,000 population. The leading causes of death were: Pneumonia (broncho and lobar), 26; organic diseases of the heart, 14; tuberculosis (various organs), 13; diarrhea and enteritis, 12; and nephritis (acute and chronic), 10. There were 8 deaths from cancer, 7 from apoplexy, 6 from syphilis, and 1 each from erysipelas and meningococcus meningitis. There were 17 deaths among nonresidents. These are not included in the above statistics.

There were 359 live births and 16 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 31.33. Deaths among children under 1 year of age numbered 53, giving an infant mortality rate, based on the number of live births reported, of 147.63.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during the month was 171, of whom 22 were employees (2 white and 20 colored), 11 were members of employees' families (2 white and 9 colored), 16 were Canal Zone agriculturists, 86 were other civilian nonemployees, and 36 were Army and Navy personnel. Of the 33 employees and members of employees' families, 19 were probably infected outside our sanitated areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There were two deaths from malaria among residents, both Panamanians, one of whom worked for the road commission of the Republic of Panama in the interior.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$664,672.41, of which \$595,043.17 was for the Department of Operation and Maintenance, and \$69,629.24 for other Panama Canal departments.

Cash sales on the Isthmus from stock amounted to \$42,848.41.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of July, 1930, as compared with July, 1929.

It is impossible to submit figures for the month of August at the time of writing this report, since all charges, etc., involved in the accounting have not been completed.

	July, 1929.	July, 1930.
Tolls.....	\$2,259,581.87	\$2,179,389.52
Other receipts.....	366,008.43	341,693.31
Total transit revenues.....	2,625,590.30	2,521,073.83
Total transit expenses.....	1,097,936.52	1,078,660.09
Net transit revenues.....	1,527,653.78	1,442,413.74
Three per cent capital charge.....	620,105.38	625,683.92
Transit surplus.....	907,548.40	816,729.82
Business revenues.....	1,775,355.28	2,022,948.68
Business expenses.....	1,673,221.23	1,967,884.08
Net revenues.....	102,134.05	55,064.60
Three per cent capital charge.....	61,519.59	64,968.36
Business surplus.....	40,614.46	(9,903.76)
Combined revenues.....	4,400,945.58	4,544,022.53
Combined expenses.....	2,771,157.75	3,046,544.17
Net revenues.....	1,629,787.83	1,497,478.36
Three per cent capital charge.....	651,624.97	693,652.28
Combined surplus.....	948,162.86	806,826.08

Respectfully,

* J. L. SCHLEY,
Acting Governor.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., *September 22, 1930.*

No. 764.

Ecuador, Gulf of Guayaquil, buoys established. The Ecuadorian Legation in Panama is the authority for the following information relative to the establishing of two new buoys in the Gulf of Guayaquil on August 15, 1930:

1. *Puna bar*: Characteristic—Flashing white; period 3 seconds, flash 1 second, eclipse 2 seconds. Position: Lat. 2° 42' 04" S., long. 79° 55' 46" W.
2. *Moquinana*: Characteristic—Flashing white; period 3.5 seconds, flash 0.2 second, eclipse 3.3 seconds. Position: Lat. 2° 38' 41" S., long. 80° 2' 12" W.

J. L. SCHLEY,
Acting Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., *September 24, 1930.*

No. 767.

Panama Canal, Atlantic approach, gas and whistling buoy replaced. The gas and whistling buoy, located 8½ miles from the East Breakwater light, Cristobal harbor, which was temporarily discontinued due to being struck by a ship, has been replaced. The specially constructed spar buoy marking this position has been discontinued.

J. L. SCHLEY,
Acting Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending September 13, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Caldas	United Fruit Co.		September 12		230
Durazzo	Hamburg-American Line		September 7		140
Guayaquil	Panama R. R. S. S. Line		September 7		108
Heredia	United Fruit Co.		September 7		26
Santa Tecla	N. O. & S. A. S. S. Co.		September 7		8
Marquis de Comillas	Spanish Line		September 8		767
San Francisco	Hamburg-American Line		September 7		423
Ruhr	Hamburg-American Line		September 8		27
Arizona	French Line	September 7	September 7	33	58
Calamares	United Fruit Co.	September 7	September 7	15	278
Iriona	United Fruit Co.	September 7	September 8	(¹)	129
Buenaventura	Panama R. R. S. S. Line	September 7	September 8	394	121
Colombo	Italian Line	September 7	September 9	117	529
Cali	Roland Line	September 7	September 13	559	255
Colombia	Panama Mail S. S. Co.	September 8	September 9	203	477
Rapot	North German Lloyd	September 8	September 9	93	54
Tolosa	United Fruit Co.	September 8	September 10	379	2
Santa Rita	Grace Line	September 9	September 9	46	282
Champerico	Pacific Steam Navigation Co.	September 10		211	
Belray	Aluminium Line	September 10	September 10	450	(²)
Venezuela	Panama Mail S. S. Co.	September 10	September 11	493	137
Santa Marta	United Fruit Co.	September 10	September 11	275	166
Castilla	United Fruit Co.	September 10	September 11	539	128
Pacific President	Furness, Withy & Co.	September 10	September 12	(¹)	385
Comedian	T. & J. Harrison	September 11		299	
Hercules	Royal Netherlands S. S. Co.	September 11	September 11	(¹)	304
San Rafael	States S. S. Line	September 11	September 11	38	(²)
Triumph	Roosevelt S. S. Co., S. B.	September 11	September 12	140	(²)
Swiftlight	C. D. Mallory & Co.	September 11	September 13	11,607	(²)
Bogota	United Fruit Co.	September 11	September 13	5	268
Ancon	Panama R. R. S. S. Line	September 12		4,877	
Baralt	Royal Netherlands S. S. Co.	September 12		474	
Portland	Hamburg-American Line	September 12	September 12	113	146
Laguna	Pacific Steam Navigation Co.	September 12	September 12	32	59
Saramacca	United Fruit Co.	September 12	September 13	616	176
Camden	United Fruit Co.	September 12	September 13	7,417	(²)
Eate	North German Lloyd	September 12	September 13	85	109
Iriona	United Fruit Co.	September 12	September 13	34	23
Atlantida	Standard Fruit & S. S. Co.	September 12	September 13	91	394
Lauritis Swenson	Olsen S. S. Line	September 12	September 13	1	249
Habana Maru	Osaka Shosen Kaisha	September 12	September 13	69	(²)
Essequibo	Pacific Steam Navigation Co.	September 13		42	
Santa Barbara	Grace Line	September 13	September 13	27	117

¹ No cargo discharged.

² No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending September 20, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
President Fillmore	Dollar Line	September 5	September 5		2
San Jose	United Fruit Co.	September 5	September 6	606	33
Liberator	Tampa Intercean S. S. Co.	September 6	September 6	254	
Santa Tecla	N. O. & S. A. S. S. Co.	September 7	September 7	20	58
Cauca	National Navigation Co.	September 8	September 8		163
Santa Rita	Grace Line	September 9	September 9	10	45
Venezuela	Panama Mail S. S. Co.	September 9	September 10	336	1
Cambrai	U. S. Government	September 9	September 10	528	26
Colombia	Panama Mail S. S. Co.	September 9	September 10	50	9
Triumph	Roosevelt S. S. Co., S. B.	September 11	September 11	179	
Saramacca	United Fruit Co.	September 11	September 12	92	109
Laguna	Pacific Steam Navigation Co.	September 12	September 12		50
Habana Maru	Osaka Shosen Kaisha	September 12	September 12	91	
Lauritis Swenson	Fred Olsen & Co.	September 13	September 13	561	
Santa Barbara	Grace Line	September 13	September 13	1	3
Rakuyo Maru	Nippon Yusen Kaisha	September 15	September 16	231	12
Santa Inez	Grace Line	September 15	September 15	11	
Champerico	Pacific Steam Navigation Co.	September 16	September 16		1
City of San Francisco	Panama Mail S. S. Co.	September 18	September 18	29	
Sapelo	U. S. Government	September 18	September 19		12
President Wilson	Dollar Line	September 19	September 19	15	
Virginia	Panama-Pacific Line	September 19	September 19		187
San Mateo	United Fruit Co.	September 19	September 20	359	60
Aachen	North German Lloyd	September 19	September 20	336	

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, September 20, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Essequibo	13	14	6	05	14	12	52	14	14	10	450	57	8	New York, N. Y.	Talcahuano, Chile	General	2,141	9,158	6,176
Barrat	12	16	6	05	14	13	22	14	14	10	202	33	1	Cristobal, C. Z.	Guayaquil, Ecuador	General	91	1,183	742
Helene	13	22	35	14	7	25	14	14	14	15	380	52	0	Göteborg, Swed.	Portland, Ore	Ballast	5,504	3,972	3,972
Point Str.	14	6	50	14	7	30	14	15	13	14	324	46	2	New Orleans, La.	San Francisco, Cal.	General	3,291	3,984	2,612
Kentuckian	14	6	10	14	7	30	14	15	00	14	414	53	7	Boston, Mass.	Portland, Ore	General	3,459	7,049	4,941
Taybank	14	1	35	14	9	40	14	16	38	14	427	57	4	Baltimore, Md.	Shanghai, China.	General	2,000	7,623	5,412
Onondaga	14	1	35	14	9	40	14	20	53	14	251	0	0	Chester, Pa.	Portland, Ore	Auto. parts	1,440	10,589	7,513
Winipeg	13	22	30	14	13	05	14	19	14	18	427	0	0	Havre, France.	Vancouver, B. C.	General	4,326	6,630	4,916
Eastern Star	14	17	30	14	18	10	15	8	53	15	480	66	2	Philadelphia, Pa.	Seattle, Wash.	General	1,607	6,551	6,551
Pacific Hemlock	14	19	50	14	20	10	15	10	35	15	409	54	2	Philadelphia, Pa.	Corral, Chile.	General	7,062	5,448	3,967
Sveaport	14	19	15	6	20	15	13	33	15	16	378	7	1	Stockholm, Swedan	Balboa, C. Z.	Ballast	8,044	7,611	5,497
Swan	15	6	05	15	13	04	15	13	04	15	180	0	0	Cristobal, C. Z.	Seattle, Wash.	Steel, general.	793	6,809	4,842
Steel Worker	14	23	40	15	6	05	15	14	19	15	424	56	0	Baltimore, Md.	Vancouver, B. C.	General	6,950	6,214	4,655
Gracia	15	1	15	7	20	15	15	06	15	16	315	54	0	Glasgow, Scotland	Moit, Japan.	General	8,044	7,611	5,497
England Maru	15	3	05	15	7	25	15	15	28	15	485	51	0	Tampa, Fla.	Moit, Japan.	Phos ate, cotton.	6,950	6,214	4,655
Cingales	15	8	50	15	9	10	15	16	25	15	441	0	0	New York, N. Y.	Manila, P. I.	Grain, general.	3,822	9,313	6,672
Prince	15	8	55	15	9	30	15	17	04	15	420	5	0	Falmouth, England	Los Angeles, Calif.	Ballast	6,170	4,510	4,510
Lustrous	15	9	00	15	10	35	15	17	59	15	390	54	2	New Orleans, La.	Honolulu, T. H.	Ballast	2,473	6,170	4,253
Kishinoquillas	15	9	00	15	10	35	15	19	00	15	390	54	2	New Orleans, La.	Oleum, Calif.	Ballast	6,170	4,510	4,510
W.D. Anderson	15	8	10	15	12	55	15	19	33	15	391	51	0	Philadelphia, Pa.	Oleum, Calif.	Ballast	2,473	6,170	4,253
Heranger	15	7	05	15	14	20	15	21	15	16	398	51	0	Copenhagen, Den.	Gatun, C. Z.	Ballast	6,864	5,260	8
Mandinga	15	7	05	15	14	20	15	21	15	16	398	51	0	Copenhagen, Den.	Gatun, C. Z.	Ballast	6,864	5,260	8
No. 18, C. Z.	15	7	05	15	14	20	15	21	15	16	398	51	0	Cristobal, C. Z.	Gatun, C. Z.	Towing barges	8	8	8
No. 3782	15	7	05	15	14	20	15	21	15	16	398	51	0	Cristobal, C. Z.	Gatun, C. Z.	Towing barges	8	8	8
No. 20, C. Z.	15	7	05	15	14	20	15	21	15	16	398	51	0	Cristobal, C. Z.	Gatun, C. Z.	Towing barges	8	8	8
Bethore	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	14	18	16	550	3	2	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Antioch	15	15	10	16	3	00	16	1											

Canada	17	3	40	17	11	55	17	18	23	17	22	00	Swedish	426	0	56	0	19	1	Gothenburg, Swed	Tacoma, Wash.	Paper, orc, gen.	4,834	7,476	5,485
Oakli	17	9	50	17	14	40	17	22	20	17	22	20	British	449	0	59	0	30	3	Avonmouth, Eng	General	7,027	8,268	5,432	
Indiana	17	2	50	17	15	10	17	22	35	18	00	05	French	418	0	56	0	20	0	Havrre, France	Vancouver, B. C.	General	1,313	7,157	4,936
Oreoma	17	15	20	18	6	05	18	13	20	18	14	20	British	511	6	62	0	24	3	Liverpool, England	Talcahuano, Chile	General	1,558	12,417	8,305
Santa Maria	17	19	15	18	6	12	18	13	27	18	14	20	American	466	0	64	0	24	7	New York, N. Y.	Valparaiso, Chile	General	2,071	10,626	6,680
San Roberto	17	23	50	18	7	30	18	14	24	18	15	30	British	407	0	52	0	19	11	London, England	Los Angeles, Calif	Ballast	6,239	6,239	4,350
Lochkatrine	17	11	20	18	10	40	18	17	17	18	18	48	British	445	4	62	3	23	4	Rotterdam, Holl'd	Portland, Ore	General	3,992	10,802	7,595
Firmore	18	6	30	18	11	15	18	18	15	18	19	46	American	449	1	57	2	20	0	Baltimore, Md	Cruz Grande, Chile	General	7,900	5,238	5,238
El Ciervo	18	12	15	18	12	30	18	19	11	18	20	30	British	467	0	52	0	18	11	Philadelphia, Pa.	Los Angeles, Calif	Ballast	6,046	4,326	4,326
Sapelo	18	7	35	18	14	05	18	20	57	20	14	25	American	461	0	60	0	19	0	Hampton Rds., Va.	Los Angeles, Calif	Ballast	9,808	7,294	7,294
Cities Service	18	19	45	18	20	00	19	9	34	19	10	34	American	468	6	62	7	21	0	New York, N. Y.	Los Angeles, Calif	Ballast	356	7,833	5,709
St. Mihal	18	4	50	19	6	05	19	13	45	19	13	45	American	448	0	58	0	20	0	New York, N. Y.	Balboa, C. Z.	General	10,533	10,533	10,533
Justin	18	4	50	19	6	10	19	13	45	19	14	50	German	449	5	58	2	16	7	Bremervlaeren, Ger	Vancouver, B. C.	Ballast	10,054	7,388	7,388
President	19	4	35	19	7	10	19	14	11	19	21	48	American	516	5	72	2	26	0	New York, N. Y.	Manila, P. I.	General	9,841	6,946	6,946
Virginia	19	5	50	19	8	30	19	14	48	20	17	11	American	586	4	80	3	26	0	New York, N. Y.	San Francisco, Cal.	General	6,945	5,032	5,032
Java Arrow	18	21	30	19	8	30	19	16	29	19	17	55	American	458	3	62	7	20	0	New York, N. Y.	Los Angeles, Calif	Ballast	3,572	8,628	6,585
Yankee	18	21	55	19	9	40	19	17	15	19	18	20	American	468	3	62	7	18	0	New York, N. Y.	Los Angeles, Calif	Ballast	178	238	163
Illinois	19	9	40	19	9	55	19	18	01	19	19	00	American	416	8	56	1	21	0	Pt. Arthur, Tex.	Los Angeles, Calif	Ballast	6,017	7,196	4,956
City of	19	10	20	19	11	05	19	18	18	20	10	25	British	433	0	57	3	21	6	New York, N. Y.	Fromante, Aust'lia	General	15,551	4,297	4,297
Evansville	19	10	50	19	13	05	19	19	50	20	12	30	Colombian	407	0	56	0	10	6	Cristobal, C. Z.	Buenaventura, Col.	General	6,585	4,431	4,431
Cauca	19	11	15	19	15	20	19	22	09	20	22	40	German	431	2	50	4	25	8	Bremen, Germany	Valparaiso, Chile	General	15,425	5,301	5,301
Aachen	19	11	15	19	17	10	20	9	43	20	11	01	American	550	3	72	2	24	7	Baltimore, Md	Cruz Grande, Chile	Ballast	7,075	5,301	5,301
Biscaya	20	0	05	20	6	25	20	12	55	20	17	30	German	412	0	55	0	19	0	Bowling, Glasgow	Los Angeles, Calif	Ballast	104	1,132	711
Svealand	20	6	05	20	7	15	20	14	28	20	18	55	Swedish	561	0	72	2	23	0	Sparrows Pt., Md	Cruz Grande, Chile	Ballast	2,769	6,627	4,993
Lina L.	20	10	25	20	10	40	20	17	32	20	20	40	French	420	0	54	0	13	0	Antwerp, Belgium	Los Angeles, Calif	Ballast	1,525	11,136	8,109
Manizales	17	16	00	20	11	50	20	19	27	20	20	40	German	216	5	32	9	12	4	Cristobal, C. Z.	Guayquil, Ecuador	General	3,132	7,874	5,992
Absaroka	20	12	00	20	12	15	20	19	00	20	21	50	American	409	6	54	1	18	10	New York, P. R.	Seattle, Wash.	Gen. steel, iron	2,708	9,032	6,638
Port Hardy	20	12	15	20	12	55	20	20	25	20	21	50	British	481	0	62	0	25	0	San Juan, N. Y.	Gen. steel, iron	1,132	7,874	5,992	
Fella	20	4	25	20	14	55	20	21	30	20	23	05	Italian	430	0	55	0	19	3	Trieste, Italy	Frederande, Aust'lia	General	2,708	9,032	6,638
Nebraska	20	14	55	20	15	15	20	22	00	20	23	10	American	471	2	59	0	18	3	Boston, Mass	Vancouver, B. C.	General	6,502	7,473	5,504

1 Tanker. 2 Transport. 3 Motor ship.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Western Sun	13	21	50	14	5	47	14	13	45	14	13	45	American	480	6	66	0	28	4	Los Angeles, Calif	Chester, Pa.	Gasoline	13,157	9,607	6,551
Sage Brush	13	19	40	14	6	37	14	14	15	14	14	15	American	409	8	54	0	23	0	Seattle, Wash.	Philadelphia, Pa.	Lumber, general	8,500	6,002	4,754
Chiloff	13	20	00	14	7	30	14	14	55	14	14	55	American	391	8	51	3	25	0	New York, N. Y.	New York, N. Y.	Dark gas oil	6,950	5,549	3,955
Abnon	14	3	40	14	7	36	14	16	05	14	16	05	American	368	8	52	2	21	0	Longview, Wash.	Mobile, Ala.	General	5,100	5,732	4,131
Pueblo	14	7	10	14	7	59	14	16	35	14	16	35	American	340	1	49	2	25	0	Los Angeles, Calif	Norfolk, Va.	Gasoline	6,000	4,613	2,996
Almagro	14	14	10	14	12	32	14	19	40	15	19	40	British	303	4	43	0	15	0	Corral, Chile	New York, N. Y.	General	870	2,621	1,770
Jefferson Myers	14	14	15	14	15	07	14	15	07	14	15	07	American	440	0	56	0	30	0	Vancouver, B. C.	Rotterdam, Holl'd	General	9,495	8,300	6,920
West Grana	15	8	54	15	9	53	15	18	00	17	9	40	American	410	0	54	4	25	0	Aberdeen, Wash.	New York, N. Y.	Lumber	6,000	6,483	4,565
Leeds City	15	11	30	15	12	11	15	20	15	15	22	05	British	400	0	54	3	25	0	Vancouver, B. C.	London, England	General	7,980	6,997	5,461
Adolf von	15	12	50	15	14	23	15	21	50	16	5	08	German	409	1	53	1	23	0	Corral, Chile	Hamburg, Germany	General	6,502	7,473	5,504
Baeyer	15	12	30	15	15	15	15	22	10	16	2	18	American	370	0	53	2	18	0	Talcahuano, Chile	New York, N. Y.	General	2,913	6,255	4,016
Santa Inez	15	12	30	15	15	15	15	22	10	16	2	18	American	370	0	53	2	18	0	Talcahuano, Chile	New York, N. Y.	General	2,913	6,255	4,016

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Caren ^o	15	19 05	15	19 56	16	10 30			Colombian.	National Navigation Co.	107.0	22.9	9.0	Buenaventura, Col.	Cristobal, C. Z.	Lumber	90	238	163
Hanley	15	19 18	15	20 28	16	13 05			American.	Hanley S. S. Co.	440.0	56.0	29.0	Everett, Wash.	Newark, N. J.	General	9,633	8,510	6,005
Pennsylvania	15	9 35	16	10 10	16	15 45			American.	Panama-Pacific Line	586.4	80.3	31.0	San Francisco, Cal.	New York, N. Y.	General	7,150	25,252	18,194
Ditworth	15	16 20	16	6 47	16	15 45			American.	Pennsylvania Ship. Co.	435.0	60.0	26.3	San Francisco, Cal.	New York, N. Y.	Gasoline	9,540	7,441	3,077
Pollana	16	4 00	16	7 15	16	18 05			Norwegian.	Knut Knutsen	369.0	52.2	22.2	Talcahuano, Chile	Stockholm, Sweden	General	6,000	5,451	3,820
Alaskan	16	4 30	16	7 38	16	16 55			American.	Amer.-Hawaiian Line	415.0	57.3	25.5	Portland, Ore.	Boston, Mass.	General	7,246	7,980	5,359
Paul	16	5 20	16	8 13	16	18 25			American.	Ludckenbach Line	471.0	59.2	26.2	Portland, Ore.	Boston, Mass.	Lumber, general	8,104	9,027	6,539
San Zotico	16	9 50	16	10 46	16	19 20			British.	Anglo-Mexican Oil Co.	490.0	52.0	27.0	Valparaiso, Chile	Poo, Mexico, Mex.	Ballast	10,032	9,032	3,892
Agaworld	16	17 15	17	6 36	17	13 20			American.	Richfield Oil Co. of Cal.	429.3	59.0	32.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline	10,700	7,720	5,615
Ona	16	22 30	17	7 21	17	14 50			British.	Davies & Newman	430.0	57.0	26.0	Los Angeles, Calif.	Davenport, Eng.	Gas oil	9,240	7,548	3,152
Argyllshire	17	5 45	17	7 48	17	15 30			British.	Turnbull, Martin & Co.	525.2	61.4	26.0	Pa. Chalmers, N. Z.	Glasgow, Scotland	General	5,987	12,237	8,672
Mammals	17	9 15	17	9 55	17	16 00			German.	Roland Line	216.5	32.9	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	General	5,800	1,132	741
Tessa	17	13 30	17	14 25	17	21 20			Norwegian.	Knut Knutsen	375.8	51.1	24.0	Portland, Ore.	Faya	Wheat	5,985	5,083	3,930
China Arrow	17	13 20	17	14 34	17	21 45			American.	Standard Transp. Co.	408.3	62.7	27.0	Los Angeles, Calif.	Boston, Mass.	Gasoline	11,229	10,084	7,388
Mitlmeer ^s	17	11 45	17	14 45	17	22 30			German.	Atlantic Tank Rhederei	412.6	55.1	25.0	San Francisco, Cal.	Lands End, Eng.	Gasoline	8,169	6,370	3,658
Spreewald	17	15 30	18	6 08	18	14 30			German.	Hamburg-American Line	399.4	54.2	26.0	Valparaiso, Chile	Hamburg, Germany	Gasoline	7,514	6,791	4,997
Swan ¹	18	6 16	18	6 16	18	14 10			American.	U. S. Navy	187.0			Balboa, C. Z.	Cristobal, C. Z.	(*)			
Netherlands	17	17 00	18	6 48	18	15 35			British.	Royal Mail S. P. Co.	450.2	53.3	29.0	Vancouver, B. C.	Rotterdam, Holland	General	8,351	8,874	6,558
Canadian	17	20 40	18	6 47	18	16 05			British.	Can. Nat. Steamships	399.9	52.2	18.0	Aelaide, Australia	Montreal, Canada	General	3,005	5,905	4,175
Scottish	17	22 20	18	7 45	18	17 25			British.	Pacific Steam Nav. Co.	215.0	33.5	12.0	Champerco, Guat.	Cristobal, C. Z.	General	113	2,210	6,014
Jason	17	22 00	18	8 06	18	17 55			Dutch.	Royal Nether. S. S. Co.	346.4	48.4	22.6	Valparaiso, Chile	Rotterdam, Holland	General	4,412	4,321	3,120
Sidney M.	17	23 00	18	8 47	18	17 50			American.	McCormick S. S. Co.	401.4	53.2	25.6	Tacoma, Wash.	Baltimore, Md.	Lumber, piling	7,315	7,082	5,167
Hauptman ²	17	23 00	18	8 47	18	17 50			American.	Dimon S. S. Corp.	390.0	54.2	23.6	Tacoma, Wash.	New York, N. Y.	Lumber, general	7,185	6,162	4,483
Willmoto ³	18	8 50	18	9 46	18	18 55			American.	Sudden & Christenson	410.0	54.6	18.0	San Francisco, Cal.	Baltimore, Md.	General	2,662	6,603	4,832
Edwin	18	8 50	18	9 46	18	18 55			American.	Lancaster S. S. Corp.	400.7	54.2	29.0	Vancouver, B. C.	Baltimore, Md.	Lumber, general	7,221	6,018	4,914
Ipawich	18	18 00	19	25 19	19	11 30			American.	Richfield Oil Co.	500.0	71.2	29.6	Los Angeles, Calif.	New York, N. Y.	Gasoline	17,000	10,228	6,352
Tamabha	18	20 00	19	5 57	19	14 55			American.	Shaw, Savill & Albion	500.3	63.3	23.6	Ancud, N. Z.	London, England	Frozen meats	3,461	12,367	7,646
Corintho ⁴	18	21 00	19	6 49	19	14 30			British.	W. Runciman & Co.	375.0	52.0	25.0	San Francisco, Cal.	Leith, Scotland	Barley	5,273	4,393	2,649
Glenmorio ⁵	19	00 20	19	7 06	19	16 25			British.	W. Runciman & Co.	450.3	57.3	24.0	Talcahuano, Chile	New York, N. Y.	General	2,634	4,985	3,174
Ebro	19	00 35	19	8 21	19	16 00			British.	Pacific Steam Nav. Co.	450.3	57.3	24.0	Talcahuano, Chile	Baltimore, Md.	General	4,946	4,990	3,659
San Domingo	19	23 30	19	8 36	19	17 10			American.	States S. S. Corp.	376.4	52.8	21.0	Seattle, Wash.	Baltimore, Md.	General	4,946	4,990	3,659
Abraham	19	3 00	19	9 21	19	18 30			Norwegian.	Fred Olsen & Co	435.9	56.2	26.6	Vancouver, B. C.	Oslo, Norway	(*)	7,609	5,784	3,603
Linedon ⁶	19	5 45	19	9 39	19	18 55			American.	N. O. & S. A. S. Co.	324.0	46.2	24.6	San Antonio, Chile	New Orleans, La.	Beans, coffee	623	3,257	1,977
Nesca King	19	14 00	19	14 50	19	21 35			American.	Standard Transp. Co.	435.6	59.2	29.0	Seattle, Wash.	New York, N. Y.	Fuel distillate	10,130	9,922	4,371
Ario	19	14 25	19	15 20	19	22 25			American.	Amer.-Hawaiian Line	434.3	57.7	25.0	Seattle, Wash.	Boston, Mass.	General	7,171	5,853	3,588
Georgian	19	14 25	19	15 20	19	22 25			American.	Amer.-Hawaiian Line	434.3	57.7	25.0	Seattle, Wash.	Boston, Mass.	General	7,171	5,853	3,588

¹ Tanker. ² Motor ship. ³ Tug. ⁴ Coffee, platinum, and cylinders. ⁵ For orders. ⁶ Nitrates, cotton, ore, and bark.

Bautta.....	19	19.00	19	19.55	20	11.45	20	11.45	20	Norwegian.....	William Hansen.....	270.1	33.1	18.7	Santa Rosa, Peru.....	Wilmington, Del.,	Guano.....	2,450	1,657	944
Tuscaloosa City.....	19	22.10	20	6.01	20	14.00	20	14.00	20	American.....	Isthmian S. S. Co.....	424.2	56.2	26.0	New Westminster.....	Avonmouth, Eng.,	General.....	7,749	5,687	3,450
Gen. Geo. W. Getty.....	20	6.01	20	17.53	20	17.53	20	17.53	20	American.....	U. S. Army.....	98.0	22.0	.....	Balboa, C. Z.....	Cristobal, C. Z.....	.....	.....	.....
San Vicente.....	20	14.10	20	14.55	20	22.00	20	22.00	20	American.....	Quaker Liner.....	410.5	54.3	26.0	Seattle, Wash.....	Philadelphia, Pa.....	.....	6,982	6,572	4,900
Ward.....	20	14.40	20	15.23	20	21.25	20	22.00	20	American.....	Roosevelt S. S. Co., S.B.....	395.5	55.0	24.0	Whyalla, Australia.....	New York, N. Y.....	General.....	6,218	7,351	5,247

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

		* ARRIVALS.										* DEPARTURES.									
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	To—	Date.	Vessel.	Line.	For—										
September 14.....	Toledo.....	United Fruit Co.....	Port Limon, Costa Rica.	September 14.....	No. 945-M ¹⁵	Pan American-Grace Airways.....	Talara via wayports.	September 14.....	No. 945-M ¹⁵	Pan American-Grace Airways.....	Talara via wayports.										
September 15.....	Guadeloupe.....	French Line.....	St. Nazaire via waypts.	September 14.....	No. 9664 ¹⁵	Pan American Airways.....	Miami via wayports.	September 14.....	No. 9664 ¹⁵	Pan American Airways.....	Miami via wayports.										
September 15.....	August Thyssen.....	Aluminium Line.....	Nagasaki via waypts.	September 14.....	No. 142-M ¹⁵	Pan American Airways.....	San Salvador via wayports.	September 14.....	No. 142-M ¹⁵	Pan American Airways.....	San Salvador via wayports.										
September 15.....	United Fruit Co.....	United Fruit Co.....	Barranquilla & wayports.	September 14.....	Cartago.....	United Fruit Co.....	New Orleans and waypts.	September 14.....	Cartago.....	United Fruit Co.....	New Orleans and waypts.										
September 15.....	Pastores.....	San American Airways.....	New York via Habana.	September 15.....	Aneon.....	Panama R. R. & S. S. Line.....	New York via Haiti.	September 15.....	Aneon.....	Panama R. R. & S. S. Line.....	New York via Haiti.										
September 16.....	No. 9670 ¹⁵	Pan American Airways.....	Cartagena, Colombia.	September 15.....	Comedian.....	Aluminium Line.....	Lands End, England.	September 15.....	Comedian.....	Aluminium Line.....	Lands End, England.										
September 16.....	Castilla.....	United Fruit Co.....	San Salvador and waypts.	September 16.....	August Thyssen.....	Pan American Airways.....	Amsterdam, Holland.	September 16.....	August Thyssen.....	Pan American Airways.....	Amsterdam, Holland.										
September 17.....	Tela.....	United Fruit Co.....	New Orleans, La.	September 17.....	No. 9685 ¹⁵	Pan American Airways.....	San Salvador and waypts.	September 17.....	No. 9685 ¹⁵	Pan American Airways.....	San Salvador and waypts.										
September 17.....	Crynsen.....	Royal Netherlands S. S. Co.....	Amsterdam and waypts.	September 17.....	No. 9776 ¹⁵	French Line.....	Miami via wayports.	September 17.....	No. 9776 ¹⁵	French Line.....	Miami via wayports.										
September 17.....	No. 945-M ¹⁵	Pan American-Grace Airways.....	Talara via wayports.	September 17.....	Guadeloupe.....	French Line.....	Port Limon, Costa Rica.	September 17.....	Guadeloupe.....	French Line.....	Port Limon, Costa Rica.										
September 17.....	No. 9664 ¹⁵	Pan American Airways.....	San Salvador and waypts.	September 17.....	Pastores.....	United Fruit Co.....	Colon, Rep. of Panama.	September 17.....	Pastores.....	United Fruit Co.....	Colon, Rep. of Panama.										
September 17.....	No. 9137 ¹⁵	Pan American Airways.....	Miami via wayports.	September 17.....	Inapachuina ¹⁶	A. Tagaropolos.....	Colon, Rep. of Panama.	September 17.....	Inapachuina ¹⁶	A. Tagaropolos.....	Colon, Rep. of Panama.										
September 17.....	Inapachuina ¹⁶	United Fruit Co.....	Colon, Rep. of Panama.	September 17.....	Annetta I. ¹⁶	Gough Brothers.....	Port Limon, Costa Rica.	September 17.....	Annetta I. ¹⁶	Gough Brothers.....	Port Limon, Costa Rica.										
September 17.....	A. Tagaropolos.....	United Fruit Co.....	Colon, Rep. of Panama.	September 17.....	No. 309-N ¹⁵	Pan American Airways.....	Talara via wayports.	September 17.....	No. 309-N ¹⁵	Pan American Airways.....	Talara via wayports.										
September 18.....	Pasajero ¹⁷	Royal Netherlands S. S. Co.....	Port Limon, Costa Rica.	September 18.....	No. 144-M ¹⁵	Pan American Airways.....	Porto Cabella and waypts.	September 18.....	No. 144-M ¹⁵	Pan American Airways.....	Porto Cabella and waypts.										
September 18.....	Bridgetown.....	Colombian S. S. Line.....	New Orleans via Habana.	September 18.....	Metapan.....	United Fruit Co.....	New York via waypts.	September 18.....	Metapan.....	United Fruit Co.....	New York via waypts.										
September 18.....	Crynsen.....	Royal Netherlands S. S. Co.....	Port Limon, Costa Rica.	September 18.....	Tela.....	United Fruit Co.....	Puerto Colombia.	September 18.....	Tela.....	United Fruit Co.....	Puerto Colombia.										
September 19.....	Grunewald.....	Standard Fruit & S. S. Co.....	Hamburg via wayports.	September 18.....	No. 9670 ¹⁵	Pan American Airways.....	San Salvador and waypts.	September 18.....	No. 9670 ¹⁵	Pan American Airways.....	San Salvador and waypts.										
September 19.....	No. 945-M ¹⁵	Pan American-Grace Airways.....	Tampico via wayports.	September 19.....	Bridgetown.....	Colombian S. S. Line.....	New York via wayports.	September 19.....	Bridgetown.....	Colombian S. S. Line.....	New York via wayports.										
September 20.....	Pearl Marie ¹⁷	G. I. Bryan.....	Colon, Rep. of Panama.	September 19.....	Cordoba C-40 ¹⁵	Sealt's Airplane Co.....	Barranquilla and waypts.	September 19.....	Cordoba C-40 ¹⁵	Sealt's Airplane Co.....	Barranquilla and waypts.										
September 20.....	Nueva Espana ¹⁶	Pan American Airways.....	Colon, Rep. of Panama.	September 19.....	Castilla.....	United Fruit Co.....	New Orleans and waypts.	September 19.....	Castilla.....	United Fruit Co.....	New Orleans and waypts.										
September 20.....	No. 144-M ¹⁵	Pan American Airways.....	Pto. Cabella and waypts.	September 20.....	Amapala.....	Standard Fruit & S. S. Co.....	New Orleans and waypts.	September 20.....	Amapala.....	Standard Fruit & S. S. Co.....	New Orleans and waypts.										
September 20.....	No. 142-M ¹⁵	Pan American Airways.....	Miami via wayports.	September 20.....	Nueva Espana ¹⁶	Standard Fruit & S. S. Co.....	Colon, Rep. of Panama.	September 20.....	Nueva Espana ¹⁶	Standard Fruit & S. S. Co.....	Colon, Rep. of Panama.										
September 20.....	No. 9685 ¹⁵	Pan American Airways.....	San Salvador and waypts.	September 20.....	Pearl Marie ¹⁷	G. I. Bryan.....	Bluefields, Nicaragua.	September 20.....	Pearl Marie ¹⁷	G. I. Bryan.....	Bluefields, Nicaragua.										
September 20.....	No. 300-N ¹⁵	Pan American-Grace Airways.....	Talara via wayports.	September 20.....	Crynsen.....	Royal Netherlands S. S. Co.....	Amsterdam and waypts.	September 20.....	Crynsen.....	Royal Netherlands S. S. Co.....	Amsterdam and waypts.										
September 20.....	No. 945-M ¹⁵	Pan American-Grace Airways.....	Talara via wayports.	September 20.....	Pasajero ¹⁷	Gough Brothers.....	Port Limon, Costa Rica.	September 20.....	Pasajero ¹⁷	Gough Brothers.....	Port Limon, Costa Rica.										

¹⁵ Air mail carrier. ¹⁶ Motor boat. ¹⁷ Motor schooner.

PORT OF BALBOA.

September 15.....	Dos Hermanos ¹⁸	Nippon Yusen Kaisha.....	Panama Bay, R. P.	September 15.....	Dos Hermanos ¹⁸	Nippon Yusen Kaisha.....	Panama Bay, R. P.
September 15.....	Rakuyo Maru.....	Hans Elliot.....	Valparaiso, Chile.	September 16.....	Rakuyo Maru.....	Hans Elliot.....	Valparaiso, Chile.
September 18.....	City of San Francisco.....	Nevva Panama.....	Panama Bay, R. P.	September 16.....	Nevva Panama.....	Hans Elliot.....	Panama Bay, R. P.

* Other than ships passing through the Canal.

(Continued on page 116, column 2.)

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 24, 1930.

No. 768.

West Indies and Central America, information on various lights. The following is quoted from the Hydrographic Bulletin, issued by the Hydrographic Office, Navy Department at Washington, D. C., dated September 17, 1930:

1. *Nicaragua, Grande River light reported extinguished.* The Commanding Officer of the U. S. S. *Asheville* reports that on August 26, 1930, while anchored off Rio Grande, Nicaragua, it was observed that Rio Grande light was not lighted. Approximate position: Latitude 12° 04' 00" N., longitude 83° 31' 30" W.

2. *Curacao Island, Caracas Bay, Lij Hoek, light established.* Information has been obtained through the State Department that on August 13, 1930, an unwatched flashing red acetylene light, showing one flash every 3 seconds; flash 0.3 second, eclipse 2.7 seconds, was established on Lij Hoek, western point of Caracas Bay. The light is exhibited 42 feet above high water, from a black wooden structure, and is visible 3½ miles. Approximate position: Latitude 12° 04' 19" N., longitude 68° 52' 29" W.

3. *Venezuela, Tortuga Island, amended position of light.* The unwatched flashing white light every 9 seconds, flash 3 seconds, eclipse 6 seconds, elevated 59 feet and visible 13 miles, heretofore shown on Ranches Point, is located on Delgada Point, about 5 miles further eastward. Approximate position: Latitude 10° 58' N., longitude 65° 14' W.

J. L. SCHLEY,
Acting Governor.

Tolls Charges for Transit of the Panama Canal.

1. Merchant vessels carrying passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity as determined by the Panama Canal Rules of Measurement \$1.20
2. Vessels in ballast, without passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity as determined by the Panama Canal Rules of Measurement72
3. Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton50
4. Army and navy transports, colliers, hospital ships, and supply ships, the vessel to be measured by the same rules as are employed in determining the net tonnage of merchant vessels, per net ton 1.20
5. Tolls may not exceed the equivalent of \$1.25 per net registered ton as determined by United States rules of measurement, nor be less than the equivalent of \$0.75 per net registered ton so determined.
6. Vessels returning from Gatun Lake or original point of entry into the Canal, without passing through the locks at the other end, are charged tolls for one passage only.
7. Vessels transiting the Panama Canal from Cristobal to Balboa and return for the sole purpose of having repairs made at the Balboa dry dock and shops will be exempt from payment of tolls, but a charge will be made for pilotage and for handling lines as provided for in the current tariff or supplements thereto.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective August 20, 1930.

Commodities.	Unit.	Price.
Brass, bar, average	Lb.	\$0.24
Brass, sheet, average	Lb.	.31
Bronze, Tobin, average	Lb.	.26
Gasoline, motor grade	Gal.	.135
Metal, yellow	Lb.	.29
Oakum, Navy, spun	Lb.	.15
Oakum, Navy, unspun	Lb.	.16
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder	Gal.	.28
Oil, burning, Colza	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250	Gal.	.41
Oil, kerosene, in drums	Gal.	.10
Oil, marine engine	Gal.	.50
Paint, lead, white, dry	Lb.	.14
Paint, lead, white, in oil	Lb.	.13
Paint, zinc oxide, dry	Lb.	.10
Paint, zinc oxide, in oil	Lb.	.12
Grease, gear, chain and wire rope, lubricating	Lb.	.05
Grease, yellow, cup, No. 3	Lb.	.08
Grease, yellow, cup, No. 5	Lb.	.09
Soda, ash	Lb.	.03
Waste, cotton, colored	Lb.	.14
Waste, cotton, white	Lb.	.16

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., October 1, 1930. No. 9.

Canal Traffic During September.

During the month of September, 1930, 458 commercial vessels and 15 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,057,103.58, and on the launches \$173.67, or a total tolls collection of \$2,057,277.25.

The daily average of commercial vessels was 15.26, and the average tolls collection was \$68,570.12, as compared with an average of 15 transits and \$67,104.21 in tolls for the previous month, and an average of 17.43 transits and \$73,392.98 in tolls for September, 1929. The average amount of tolls paid by each of the commercial transits was \$4,491.49, as compared with \$4,473.61 for the month of August, 1930.

The number of commercial transits for the past month was the lowest since June, 1927, when 455 vessels were passed through the Canal. The commercial tolls collected in September, 1930, were the lowest since June, 1928, when \$2,016,211.09 was assessed against 481 vessels. Although the number of transits and tolls collected for September, 1930, were lower than in the previous month, the daily averages in September were slightly higher.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 9 months of the current calendar year, with the daily averages of transits and tolls, and the totals for the first 9 months of the calendar years 1929 and 1928:

Month.	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January.....	531	\$2,360,211.24	17.13	\$76,135.84
February.....	491	2,131,386.12	17.54	76,120.93
March.....	515	2,260,002.36	16.61	72,903.30
April.....	489	2,232,763.00	16.30	74,425.43
May.....	479	2,162,898.60	15.45	69,770.92
June.....	478	2,100,994.53	15.93	70,033.15
July.....	488	2,180,511.82	15.74	70,339.09
August.....	465	2,080,230.42	15.00	67,104.21
September.....	458	2,057,103.58	15.26	68,570.12
Total, first 9 months of calendar year, 1930.....	4,394	19,556,101.67	16.10	71,670.70
Total, first 9 months of calendar year, 1929.....	4,819	20,552,891.31	17.65	75,285.31
Total, first 9 months of calendar year, 1928.....	4,671	19,432,050.24	17.05	70,919.89

As compared with the first 9 months of the calendar year 1929, the corresponding period this year has had 425 fewer transits and \$986,789.64 less tolls.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, September 27, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Port Nicholson	20	13.45	21	6.10	21	13.25	21	14.41	British	Com'ch & Dom. Line.	480.0	62.0	29.4	London, England.	Nelson, N. Z.	General	7,395	10,821	8,048
San Clemente	20	17.35	21	7.10	21	14.09	21	15.15	American	Quaker Line.	410.0	54.4	18.7	Philadelphia, Pa.	Tacoma, Wash.	General	3,892	6,476	4,682
Lake Gorin	21	11.40	21	11.45	21	18.15	22	00.27	American	Ford Motor Co.	250.0	43.0	18.10	Chester, Pa.	Long Beach, Calif.	Auto, parts	2,341	2,662	1,808
Takaka Maru	21	12.15	21	12.25	21	19.35	21	21.00	Japanese	Nippon Yusen Kaisha.	445.0	58.0	25.0	Baltimore, Md.	Kobe, Japan	General	7,500	7,989	5,856
Sunol 1	21	12.55	21	13.50	21	20.51	21	22.24	American	San Oil Co.	480.6	66.0	21.0	Chester, Pa.	Los Angeles, Calif.	Ballast	.....	9,619	6,456
Lady May 3	21	15.00	21	15.00	21	21.33	21	23.50	American	G. M. Downer	.....	.....	.....	Cristobal, C. Z.	Gatun, C. Z.	Ballast	.....	.....	.....
Henry S. Grove.	21	19.40	21	19.50	22	8.53	22	9.50	American	Nautilus S. Corp.	404.6	54.0	27.0	Baltimore, Md.	Vancouver, B. C.	Steel, general	7,645	6,755	4,688
Schwarzwald.	21	15.40	22	6.00	22	13.05	22	16.00	German	Hamburg-American Line	399.0	54.0	21.0	Hamburg, Germany	Valparaiso, Chile.	General	2,490	6,571	4,607
Hilda	22	00.50	22	7.05	22	13.54	22	15.54	Norwegian	Ostlandske Pet. Co.	470.0	64.0	20.0	Hull, England.	Talpara, Peru.	Ballast	.....	9,474	6,489
Knudsen 1 2	22	3.00	22	7.30	22	14.10	22	23.00	British	F. & W. Ritson	400.0	51.2	19.0	Liverpool, England	Valparaiso, Chile.	General	3,000	5,208	3,578
Hazel Branch.	22	5.00	22	7.50	22	15.30	22	16.30	American	Chile S. S. Co.	411.5	54.1	19.0	New York, N. Y.	Chamarral, Chile.	General	1,994	6,609	4,973
Chilcop.	22	10.00	22	10.10	22	16.59	22	18.18	British	Barber S. S. Line.	400.0	52.3	23.6	New York, N. Y.	Hongkong, China.	General	5,148	6,805	5,077
Ruby Castle	22	00.05	22	11.50	22	18.05	22	22.45	British	Imperial Oil Co.	521.5	70.4	24.0	Halifax, N. S.	Talara, Peru	Ballast	.....	12,339	7,717
Calgarohite 1 2	22	00.05	22	13.40	22	20.20	22	21.20	American	N. O. & S. S. Co.	324.0	46.2	18.11	New Orleans, La.	Talcahuano, Chile.	General	2,165	3,913	2,570
Nosa Prince.	22	9.30	22	13.40	22	20.20	22	21.20	American	U. S. Army.	89.0	22.0	.....	Cristobal, C. Z.	Balboa, C. Z.	Towing barge	.....	.....	.....
Gen. G. W.	22	15.35	23	6.10	23	12.43	24	1.40	American	Grace Line.	360.3	51.7	22.0	New York, N. Y.	Talcahuano, Chile.	General	1,568	5,957	4,325
Getty 4	22	13.30	23	6.05	23	13.20	24	3.07	German	Hamburg-American Line	360.0	48.0	17.6	Hamburg, Germany	Champerico, Guat.	General	1,720	.....	.....
Santa Elisa	23	2.00	23	7.05	23	13.30	23	16.10	American	Nelson Line.	324.0	46.0	18.6	New York, N. Y.	Seattle, Wash.	General	2,581	3,984	2,628
Artemisa.	23	8.15	23	8.30	23	15.10	23	19.40	British	Furness, Withy & Co.	420.0	53.0	17.2	Glasgow, Scotland.	Vancouver, B. C.	General	489	7,979	5,916
Chetopa.	23	6.20	23	8.35	23	16.05	23	17.10	Japanese	Osaka Shosen Kaisha.	461.0	62.0	23.0	Buenos Aires, Arg.	Kobe, Japan.	Cotton, hide, etc.	3,709	.....	.....
Pacific Trader	23	9.40	23	9.50	23	16.54	23	18.23	British	Reardon Smith Line.	401.6	54.3	24.0	Tampa, Fla.	Shanghai, China.	General	7,293	6,621	4,916
Maru 1	23	10.05	23	10.20	23	18.21	23	18.23	American	Shell Eastern Pet. Prod.	435.6	56.0	19.0	Baltimore, Md.	Los Angeles, Calif.	Ballast	.....	7,426	5,073
Stegness	22	20.25	23	12.00	23	18.35	24	13.10	American	Panama Mail S. S. Co.	389.6	48.7	23.3	New York, N. Y.	San Francisco, Cal.	General	1,540	5,920	4,178
Anbehan	23	10.10	23	13.35	23	19.55	23	21.15	Italian	Nav. Libera-Tristina.	404.2	54.0	18.10	Palermo, Spain.	San Francisco, Cal.	Ballast	.....	.....	.....
Enouar	23	12.20	23	13.35	23	19.55	23	21.15	British	Furness, Withy & Co.	430.0	53.5	16.0	Liverpool, England	Los Angeles, Calif.	Ballast	.....	.....	.....
Livrea	23	12.20	23	14.20	23	21.47	24	7.50	American	Dimon S. S. Corp.	410.5	54.3	18.0	Philadelphia, Pa.	Tacoma, Wash.	General	2,659	6,583	4,808
Elstree	23	19.00	24	6.10	24	13.00	24	14.09	Yugoslav	Baburizza & Co.	425.0	58.0	16.0	O ran, Algeria.	Iquique, Chile.	Ballast	.....	.....	.....
Grange.	23	6.50	24	7.10	24	13.50	24	14.50	American	Luckenbach Line.	436.6	57.0	21.3	Boston, Mass.	Seattle, Wash.	General	3,272	8,543	6,427
Pacific Pine.	24	8.55	24	9.05	24	15.31	24	17.00	American	Amer-Hawaiian Line.	407.7	53.7	19.0	Boston, Mass.	Tacoma, Wash.	General	2,998	7,098	5,065
Avala.	24	9.15	24	10.00	24	16.40	24	19.50	Norwegian	Fern Line.	376.6	53.8	19.6	Houston, Texas	Japan.	Cotton	4,417	6,256	4,663
Edward	24	11.10	24	11.30	24	18.10	24	19.25	Danish	Isbrandtsen Moller Co.	374.0	52.0	22.8	Baltimore, Md.	Saigon, China.	General	5,200	5,928	4,483
Luckenbach.	24	00.45	24	12.05	24	19.33	24	20.35	British	Pacific Steam Nav. Co.	261.0	46.0	16.0	New York, N. Y.	Callao, Peru.	General	833	2,746	1,626
Panama	24	00.45	24	12.05	24	19.33	24	20.35	British	Pacific Steam Nav. Co.	261.0	46.0	16.0	New York, N. Y.	Callao, Peru.	General	833	2,746	1,626
Slimmesstad 1	24	9.15	24	10.00	24	16.40	24	19.50	Norwegian	Fern Line.	376.6	53.8	19.6	Houston, Texas	Japan.	Cotton	4,417	6,256	4,663
Nicolme	24	11.10	24	11.30	24	18.10	24	19.25	Danish	Isbrandtsen Moller Co.	374.0	52.0	22.8	Baltimore, Md.	Saigon, China.	General	5,200	5,928	4,483
Maersk 1	24	00.45	24	12.05	24	19.33	24	20.35	British	Pacific Steam Nav. Co.	261.0	46.0	16.0	New York, N. Y.	Callao, Peru.	General	833	2,746	1,626
Cid.	24	00.45	24	12.05	24	19.33	24	20.35	British	Pacific Steam Nav. Co.	261.0	46.0	16.0	New York, N. Y.	Callao, Peru.	General	833	2,746	1,626

1 Launch. 2 Motor ship. 3 Tug. 4 Tug.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Fernbank ?	21	1.40	21	10.45	21	18.10	21	18.45	Norwegian.	Fearnley & Eger	382.7	53.4	24.0	Whyalla, Australia.	Baltimore, Md.	Iron ore.	6,982	6,112	4,205
West Ira	21	11.50	21	12.40	21	19.50	21	19.50	American.	McCormick S. Co.	416.0	94.2	25.0	Vancouver, B. C.	Buenos Aires, Arg.	Lumber, general.	8,290	6,753	5,071
Caldus ?	20	21.15	21	13.40	21	21.25	21	21.25	Colombian.	National Navigation Co.	110.0	21.1	9.6	Buenaventura, Col.	Cristobal, C. Z.	General.	5,700	5,104	3,704
Atago Maru ?	21	8.45	21	14.45	21	22.00	22	12.00	Japanese.	Nippon Yusen Kaisha.	440.2	57.0	28.0	Manila, P. I.	New York, N. Y.	Rubber, general.	10,128	8,158	5,474
Marsadok ?	21	16.54	21	17.51	22	10.35	22	10.35	American.	Charles Nelson & Co.	324.0	46.2	24.0	Tacoma, Wash.	Baltimore, Md.	Ice, general.	3,473	2,684	2,028
Murla	22	9.15	22	10.17	22	17.30	22	17.30	German.	Roland Line	449.2	38.1	25.0	Corral, Chile	Hamburg, Germany	General.	8,277	7,756	5,378
Leiza	20	21.00	22	11.46	22	18.15	22	18.15	American.	Luckenbach Line	425.0	53.8	28.0	Seattle, Wash.	Mobilg, Ala.	(*)	6,762	7,917	5,205
Lukenbach.	22	8.15	22	11.46	22	19.55	22	19.55	American.	Amer.-Cuban S. S. Co.	351.0	43.0	23.0	Port Allen, T. H.	Philadelphia, Pa.	Raw sugar.	3,480	3,823	2,740
Santa Veronica.	22	14.25	22	15.00	22	22.45	22	22.45	Danish.	A. P. Moller	302.2	44.2	15.0	Holbo, P. I.	New York, N. Y.	Sugar.	2,600	3,212	2,180
Leise Maersk ?	22	6.50	23	6.15	23	13.23	23	13.23	American.	U. S. Army	448.0	58.0	32.0	San Francisco, Cal.	Brooklyn, N. Y.	War Dept. gen.	5,737 ¹	5,700	3,866
Somme	23	4.00	23	7.07	23	15.15	23	15.15	British.	F. & W. Ritson	398.0	53.9	22.3	Borral, Chile	Liverpool, England	General.	1,491	1,308	5,850
Pear Branch.	23	4.17	23	7.28	24	8.50	24	14.40	American.	U. S. Army	448.0	58.0	32.0	Balboa, C. Z.	New York, N. Y.	War Dept. gen.	1,491	1,308	5,850
Contagious ?	23	7.40	23	9.06	23	18.20	23	18.20	American.	Roosevelt S. Co., S. B.	456.1	56.2	25.0	Manila, P. I.	New York, N. Y.	Masses, gen.	7,571	7,381	5,705
Alamar	23	8.40	23	9.37	23	16.50	23	22.40	British.	Calmar S. S. Corp.	399.7	56.2	25.0	Portland, Oreg.	Baltimore, Md.	Lumber.	3,706	11,911	8,945
Remera	23	8.40	23	9.37	23	16.50	23	22.40	British.	N. Z. Shipping Co.	485.0	62.3	24.4	Wellington, N. Z.	London, England.	Frozen, general.	8,470	9,632	6,998
Pacific	23	9.15	23	10.06	23	19.05	23	19.05	British.	Furness, Withy & Co.	435.9	60.7	27.5	Vancouver, B. C.	Glasgow, Scotland.	General.	9,667	9,258	6,944
Exporter ?	23	9.45	23	10.51	23	19.30	23	19.30	American.	Amer.-Hawahan Line	472.3	57.2	27.4	Portland, Oreg.	Boston, Mass.	General.	7,856	8,454	6,344
Mexican.	23	12.45	23	13.40	23	20.40	24	00.05	German.	North German Lloyd	432.3	59.1	26.3	Vancouver, B. C.	Hamburg, Germany	General.	8,867	8,699	6,363
Horace	23	14.05	23	14.43	23	21.50	23	21.50	American.	Luckenbach Line	445.0	58.0	28.0	Portland, Oreg.	Boston, Mass.	General.	8,068	10,332	7,475
Lukenbach.	23	16.15	23	17.00	24	10.40	24	16.12	French.	French Line	493.1	61.2	37.0	Vancouver, B. C.	Havre, France	General.	9,376	10,138	7,673
Washington ?	23	18.00	23	19.40	24	11.55	24	17.35	British.	Rowland Lemmens, Ltd.	385.0	52.0	24.0	Talati, Chile	Azores	Nitrate	10,138	7,944	5,408
Quereus	23	19.30	23	20.40	24	13.24	24	13.20	Norwegian.	Faldor Verik Sandsford	451.9	59.2	26.0	Los Angeles, Calif.	London, Eng.	Gasoline.	9,000	7,731	5,759
Sandar ?	24	6.10	24	7.06	24	15.00	24	15.00	Yugoslav	Yugoslavski Lloyd	426.0	51.6	22.0	Saeta Coblosa, Chile	Azores	Nitrate of soda.	1,507	1,572	1,081
Triglav	24	7.35	24	9.19	24	15.50	24	15.50	American.	Panama Mail S. S. Co.	360.2	51.6	22.0	San Francisco, Cal.	New York, N. Y.	General.	1,507	1,572	1,081
Guatemala.	24	11.00	24	11.46	24	18.55	24	18.55	German.	Hamburg-American Line	227.2	34.4	24.0	Susquah, Ecuador	Cristobal, C. Z.	General.	13,190	13,734	6,340
Tengo	25	1.40	25	6.07	25	14.45	25	14.45	American.	Tidewater Oil Co.	480.6	66.0	28.0	San Francisco, Cal.	New York, N. Y.	Gasoline.	4,810	3,681	2,600
Tidewater ?	25	6.00	25	7.12	25	14.55	25	14.55	American.	N. O. & S. A. S. Co.	324.0	46.2	24.0	Yapocilla, Chile	New Orleans, La.	Nitrate of soda.	5,002	6,652	4,704
Ness Queen.	25	2.30	25	7.36	25	18.00	25	18.00	German.	Hamburg-American Line	410.9	50.7	26.0	Los Angeles, Calif.	Hamburg, Germany	General.	8,643	6,486	4,336
Nitrois.	25	5.30	25	8.06	25	18.00	25	18.00	Norwegian.	Agersten & Waage	420.3	57.2	26.0	Los Angeles, Calif.	Avonmouth, Eng.	Gasoline.	9,231 ¹	7,442	5,132
Svalder ?	25	9.35	25	10.37	25	19.10	25	19.10	Norwegian.	Anglo-Saxon Pet. Co.	351.0	50.0	26.0	Los Angeles, Calif.	Charleston, W. I.	Gasoline.	8,291	7,216	4,912
S-12 ?	25	2.15	25	11.12	25	20.20	25	20.05	American.	U. S. Navy	406.3	54.2	26.3	Balboa, C. Z.	Liverpool, England	General.	8,500	10,678	7,674
La Paz ?	25	11.00	25	18.12	26	10.55	26	10.55	British.	Pacific Steam Nav. Co.	477.2	63.0	28.0	Talcahuano, Chile	London, England.	General.	7,488	8,625	5,014
Port Gibborne ?	25	18.30	26	6.00	26	15.45	26	15.45	American.	Comth & Dom. Line	416.5	56.1	26.0	Sydney, Australia.	Houston, Texas	Gasoline.	7,450	6,935	5,339
New Jersey ?	25	14.40	26	6.57	26	14.58	27	8.30	British.	The Texas Co.	356.7	51.9	27.0	San Francisco, Cal.	Cristobal, C. Z.	General.	7,957	6,979	5,389
Surinam	25	17.10	26	7.08	26	18.50	26	19.50	British.	United Fruit Co.	400.5	44.2	26.0	Victoria, B. C.	Manchester, Eng.	General.	8,470	9,632	6,998
Vernon City	25	17.10	26	7.08	26	18.50	26	19.50	British.	Sir W. R. Smith & Sons	400.5	44.2	26.0	Victoria, B. C.	Manchester, Eng.	General.	8,470	9,632	6,998

¹ Tanker.

² Motor ship.

³ For orders.

⁴ Canned fruit, salmon, and general.

⁵ Submarine.

Ship	Date	Vessel	Line	From	Date	Vessel	Line	To
Tokai Maru 7	25 19 20 28	8 19 26	19 55 26	23 43	Japanese	446 0	Hongkong, China	Baltimore, Md.
El Cierro 7	25 19 20 28	8 51 26	20 00 26	20 00	British	407 4	La Libertad, Ecua.	Philadelphia, Pa.
Orbita	26 1 25 28	9 24 26	18 55 27	1 10	British	569 2	Talcahuano, Chile	Liverpool, England
Pennsylvaniaan	26 4 35 26	10 06 26	20 25 26	20 25	American	407 7	Seattle, Wash.	Boston, Mass.
Tiger 7	26 5 00 26	10 43 26	21 05 26	21 05	American	410 0	Los Angeles, Calif.	New York, N. Y.
Cities Service								
Oklahoma 1	26 7 30 26	11 01 26	21 35 26	21 35	American	431 0	Los Angeles, Calif.	New York, N. Y.
Tairen Maru	26 2 05 26	12 20 26	22 10 26	22 10	Japanese	401 4	Pt. Gamble, Wash.	W. Hardtlee, Eng.
Tai Shan 7	26 6 30 26	13 18 26	23 45 27	2 20	Panamanian	461 9	Manila, P. I.	New York, N. Y.
Movera 7	26 7 00 26	14 00 26	23 11 26	23 11	British	385 6	Vancouver, B. C.	Glasgow, Scotland
Sir Osborn	26 15 45 26	16 34 27	11 05 27	11 05	American	386 8	Seattle, Wash.	Mobile, Ala.
Holnden 7	26 15 30 27	6 07 27	15 50 27	16 50	Norwegian	471 8	Los Angeles, Calif.	Lands End, Eng. ⁸
S-20 11	27 6 37 27	15 20 27	15 20	20 00	American	231 0	Balboa, C. Z.	Cristobal, C. Z.
S-11 11	27 6 40 27	15 20 27	15 20	20 00	American	231 0	Balboa, C. Z.	Cristobal, C. Z.
S-13 11	27 6 40 27	15 20 27	15 20	20 00	American	231 0	Balboa, C. Z.	Cristobal, C. Z.
Nasa Chief	24 1 35 27	7 12 27	18 05 27	18 05	American	299 4	Talcahuano, Chile	New Orleans, La.
Hindanger 7	26 23 15 27	7 45 27	19 05 27	20 25	Norwegian	398 0	Vancouver, B. C.	Buenos Aires, Arg.
San Felipe	27 4 30 27	8 05 27	19 30 27	20 45	American	409 8	Portland, Oreg.	New York, N. Y.
Santa Clara	27 13 57 27	15 38 27	22 20 23	4 05	American	483 3	Valparaiso, Chile	New York, N. Y.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL

* ARRIVALS				* DEPARTURES			
Date	Vessel	Line	From	Date	Vessel	Line	To
September 21	Parianina	United Fruit Co.	New Orleans and Habana	September 21	No. 9664 ¹²	Pan American Airways	San Salvador and waypts.
September 21	Pastores	United Fruit Co.	Porto Limon, Costa Rica	September 21	Crucwald	Hamburg-American Line	Caracaga, Colombia
September 21	Tela	United Fruit Co.	Baranquilla, Colombia	September 21	No. 9137 ¹²	Pan American Airways	Miami via waypts.
September 22	Darien C-35 ¹²	United Fruit Co.	Baranquilla, Colombia	September 21	Pastores	United Fruit Co.	New York via Habana
September 23	Ulua	United Fruit Co.	New York via Habana	September 21	Parianina	United Fruit Co.	New Orleans and waypts.
September 23	No. 945-M ¹¹	Pan American Airways	San Salvador and waypts.	September 22	Tela	United Fruit Co.	Porto Limon via Bogota
September 23	Cayma	Pan American-Grace Airways	Talara via wayports.	September 22	Ulua	United Fruit Co.	Porto Limon, Costa Rica
September 24	Cristobal	Elders & Fyffes, Ltd.	Avonmouth via waypts.	September 24	Cayma	Elders & Fyffes, Ltd.	Avonmouth via waypts.
September 24	Svaola	Panama R. S. S. Line	New York via Haiti	September 24	No. 9685 ¹²	Pan American Airways	San Salvador and waypts.
September 24	Escupe Fuego ¹³	Papi & Connolly	New Orleans, La.	September 24	No. 142-M ¹²	Pan American Airways	Pto. Cabello and waypts.
September 24	No. 9664 ¹²	Pan American Airways	Bluefields, Nicaragua	September 25	No. 300-N ¹²	Pan American Airways	Talara via wayports.
September 25	Ruiga	Hamburg-American Line	Miami via wayports.	September 25	No. 144-M ¹²	Pan American-Grace Airways	Talara via wayports.
September 25	Davisan	Leyland S. S. Line	Hamburg via wayports.	September 25	Svaola	United Fruit Co.	Pto. Cabello and waypts.
September 25	Bolivar	Colombian S. S. Line	New York via wayports.	September 25	Fueta	Hamburg-American Line	New York via wayports.
September 25	Sparholm	Aluminium Line	Houston via wayports.	September 25	Irona	United Fruit Co.	Puerto Colombia
September 26	Waunta	Standard Fruit & S. S. Co.	Puerto Cabezas, Nic.	September 26	Sparholm	Aluminium Line	Puerto Colombia
September 26	Alatanda	Standard Fruit & S. S. Co.	New Orleans and Habana	September 26	Waunta	Standard Fruit & S. S. Co.	Puerto Cabezas, Nic.
September 26	Tela	United Fruit Co.	Bocas, R. P.	September 26	Darien C-35 ¹²	Standard Airplane Co.	Baranquilla and waypts.
				September 26	Inapaquina ¹⁴	A. Tagarapulos	Colon, Rep. of Panama ²

¹² Air mail carrier. ¹³ Motor schooner. ¹⁴ Other than ships passing through the Canal.

(Continued on page 124, Column 2.)

Transit of "Rio de Janeiro Maru."

The new passenger and freight motor ship *Rio de Janeiro Maru*, of the Osaka Shosen Kaisha, transited the Canal from the Atlantic to the Pacific on September 25, 1930, on her maiden voyage in the around-the-world service of the company. Of 9,539 gross tons and capable of a speed of 18 knots, the vessel is the second of 2 new motor ships recently placed in service, having been preceded by a sister ship, the *Buenos Aires Maru*, which made the transit of the Canal on her initial voyage on August 3, 1930. The *Rio de Janeiro Maru* carried 78 passengers and 3,700 tons of cargo, made up principally of cotton, hides, and lubricating oils.

Starting from Kobe, the usual itinerary of the vessels in this service includes calls at Hongkong, Singapore, Durban, Cape Town, Buenos Aires, Santos, Rio de Janeiro, Habana, New Orleans, Galveston, Cristobal, Los Angeles, Yokohama, and Kobe. The transit of the Panama Canal is made in one direction only, from the Atlantic to the Pacific. Sailings are approximately monthly.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending September 27, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Essequibo.....	Pacific Steam Navigation Co.....	.....	September 14.....	.....	102
Baralt.....	Royal Netherlands S. S. Co.....	.....	September 14.....	.....	92
Ancon.....	Panama R. R. S. S. Line.....	.....	September 15.....	.....	709
Comedian.....	T. & J. Harrison Line.....	.....	September 15.....	.....	(²)
Champerico.....	Pacific Steam Navigation Co.....	.....	September 16.....	.....	607
Tolosa.....	United Fruit Co.....	September 14.....	September 14.....	20	56
Winnipeg.....	French Line.....	September 14.....	September 14.....	336	1
Feltre.....	Italian S. S. Line.....	September 14.....	September 14.....	(¹)	45
Almagro.....	Pacific Steam Navigation Co.....	September 14.....	September 15.....	.....	(²)
August Thyssen.....	Aluminium Line.....	September 15.....	September 15.....	383	(²)
Santa Inez.....	Grace Line.....	September 15.....	September 15.....	269	(²)
Guadeloupe.....	French S. S. Line.....	September 15.....	September 17.....	38	1,006
Brielle.....	Royal Netherlands S. S. Co.....	September 15.....	September 17.....	131	102
Pastores.....	United Fruit Co.....	September 15.....	September 17.....	501	50
Cauca.....	United Fruit Co.....	September 16.....	September 19.....	45	230
Castilla.....	United Fruit Co.....	September 16.....	September 20.....	44	73
Crynesen.....	Royal Netherlands S. S. Co.....	September 17.....	September 17.....	4	4
Indiana.....	French Line.....	September 17.....	September 17.....	290	3
Canada.....	Johnson Line.....	September 17.....	September 17.....	(¹)	51
Lochkatrine.....	Royal Mail Steam Packet Co.....	September 17.....	September 18.....	22	394
Oreoma.....	Pacific Steam Navigation Co.....	September 17.....	September 18.....	66	2
Tela.....	United Fruit Co.....	September 17.....	September 18.....	812	60
Metapan.....	United Fruit Co.....	September 17.....	September 18.....	686	74
Santa Marie.....	Grace Line.....	September 17.....	September 18.....	125	207
Bridgetown.....	United Fruit Co.....	September 18.....	September 19.....	2	426
Manizales.....	North German Lloyd.....	September 17.....	September 20.....	821	105
Salvador.....	Pacific Steam Navigation Co.....	September 18.....	.....	114	.....
Jason.....	Royal Netherlands S. S. Co.....	September 18.....	September 18.....	91	61
Aachen.....	North German Lloyd.....	September 18.....	September 19.....	68	163
Spreewald.....	Hamburg-American Line.....	September 18.....	September 19.....	4	106
Ebro.....	Pacific Steam Navigation Co.....	September 19.....	September 19.....	8	(²)
Corinthic.....	White Star Line.....	September 19.....	September 19.....	98	(²)
Crynesen.....	Royal Netherlands S. S. Co.....	September 19.....	September 20.....	4	133
Abraham Lincoln.....	Fred Olsen Line.....	September 19.....	September 19.....	(¹)	169
Nosa King.....	N. O. & S. A. S. S. Co.....	September 19.....	September 19.....	47	1
Amapala.....	Standard Fruit & S. S. Co.....	September 19.....	September 20.....	122	412
San Clement.....	States S. S. Line.....	September 20.....	.....	52	.....
Gruenwald.....	Hamburg-American Line.....	September 20.....	.....	4	.....
Fella.....	Panama R. R. S. S. Line.....	September 20.....	September 20.....	173	(²)
Pearl Marie.....	Feuillebois.....	September 20.....	September 20.....	(¹)	15
Salvador.....	Pacific Steam Navigation Co.....	.....	September 27.....	.....	1,129
Ebro.....	Pacific Steam Navigation Co.....	.....	September 19.....	.....	103
Gruenwald.....	Hamburg-American Line.....	.....	September 21.....	.....	528
Pastores.....	United Fruit Co.....	September 21.....	September 21.....	28	153
Parismina.....	United Fruit Co.....	September 21.....	September 21.....	23	3
Schwarzwald.....	Hamburg-American Line.....	September 21.....	September 22.....	67	1
Tela.....	United Fruit Co.....	September 21.....	September 22.....	(¹)	94

¹ No cargo discharged.

² No cargo laded.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Atago Maru	Nippon Yusen Kaisha	September 21	September 22	236	(²)
Caldas	National Navigation Co.	September 21	September 27	340	214
Nosa Prince	N. O. & S. A. S. S. Co.	September 22	September 22	138	120
Murla	North German Lloyd	September 22	September 22	113	28
Ecuador	Panama Mail S. S. Co.	September 22	September 23	35	421
Santa Elisa	Grace Line	September 22	September 23	16	20
Ulua	United Fruit Co.	September 22	September 24	396	13
Artemisia	Hamburg-American Line	September 22	September 24	183	325
Los Angeles	Hamburg-American Line	September 23	September 23	44	1
Courageous	Roosevelt S. S. Co.	September 23	September 23	70	(²)
Orazio	Italian S. S. Line	September 23	September 25	196	(²)
Guatemala	Panama Mail S. S. Co.	September 23	September 25	613	138
Cristobal	Panama R. R. S. S. Line	September 24	September 24	2,877	
Washington	French Line	September 24	September 24	89	66
Cid	Pacific Steam Navigation Co.	September 24	September 24	52	107
Sixaola	United Fruit Co.	September 24	September 25	270	32
Annam	East Asiatic Co.	September 24	September 25	85	40
Mississippi	French Line	September 24	September 25	70	390
Iriona	United Fruit Co.	September 24	September 25	918	153
Cerigo	Hamburg-American Line	September 24	September 27	890	747
Davision	Leyland S. S. Line	September 25	September 25	639	
La Paz	Pacific Steam Navigation Co.	September 25	September 25	15	(²)
Rugia	Hamburg-American Line	September 25	September 25	80	257
Oakland	Hamburg-American Line	September 25	September 26	459	459
Sparreholm	Aluminium Line	September 25	September 26	351	(²)
Bolivar	United Fruit Co.	September 25	September 26	38	194
Aconagua	Chilean S. S. Line	September 26	September 26	(²)	10
Waunta	Standard Fruit & S. S. Co.	September 26	September 26	470	(²)
Takai Maru	Osaka Shosen Kaisha	September 26	September 26	168	(²)
Tai Shan	Barber S. S. Line	September 26	September 26	17	51
Orbita	Pacific Steam Navigation Co.	September 26	September 26	14	(²)
Atlantida	Standard Fruit & S. S. Co.	September 26	September 27	104	416
Suriname	United Fruit Co.	September 26	September 27	593	(²)
Tela	United Fruit Co.	September 26	September 27	48	69
Narenta	Royal Mail Steam Packet Co.	September 26	September 27	875	20
Creole Jefe	West India Oil Co.	September 27	September 27	2,995	
Heredia	United Fruit Co.	September 27	September 27	1	
Dora K.	Feuillebois	September 27	September 27	(²)	33
San Felipe	States S. S. Co.	September 27	September 27	11	(²)

¹ No cargo discharged.

² No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending September 27, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cauca	National Navigation Co.	September 19	September 20		62
Atago Maru	Nippon Yusen Kaisha	September 21	September 21	214	
Montebello	Union Oil Co.	September 22	September 22	11,400	16
Somme	U. S. Government	September 22	September 23	74	2
City of San Francisco	Panama Mail S. S. Co.	September 22	September 27	569	
Santa Elisa	Grace Line	September 23	September 23	18	145
Guatemala	Panama Mail S. S. Co.	September 23	September 24	200	569
Courageous	Roosevelt S. S. Co.	September 23	September 23	10	
Artemesia	Hamburg-American Line	September 23	September 23	220	
Ecuador	Panama Mail S. S. Co.	September 23	September 24	130	1
Nosa Chief	N. O. & S. A. S. S. Co.	September 24	September 27		244
Annam	East Asiatic Co.	September 25	September 25	126	
Takai Maru	Osaka Shosen Kaisha	September 25	September 26	120	
Suriname	United Fruit Co.	September 25	September 26	91	
Pacific Commerce	Canadian Transport Co.	September 26	September 28	871	

Density of Water in Balboa and Cristobal Harbors.

Place.	Weight of sea water in ounces per cubic ft.			Rainy season. Average temperature, Degrees F.
	Average.	Maximum.	Minimum.	
Cristobal (between docks 8 and 9)	1018	1020	1013	84.0
Balboa (dock 18)	1011	1021	1005	83.0

(NOTE—The above is based on two months observations at Cristobal, and Balboa. Average taken at 12-foot depth. Minimum occurred after heavy rain at 3-foot depth at Cristobal and 12-foot depth at Balboa. The weight of a cubic foot of fresh water at 85° F. is 995 ounces.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.20 per barrel, Diesel oil \$1.80 per barrel, at Balboa and Cristobal.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$8 per ton of 2,240 pounds at Cristobal, and \$11 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.

The Hydrographic Office at Cristobal maintain at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometric comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference.

It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will always save time by applying to the nearest American Consul.

Hours of Departure of Passenger Trains.

Following are the hours of departure of the regular passenger trains of the Panama Railroad running between the Atlantic and the Pacific:

From Colon: Daily except Sunday, 7.00 a. m., 12.15 p. m., 4.30 p. m.; Sunday only, 9.20 a. m., 4.00 p. m.

From Panama: Daily except Sunday, 7.05 a. m., 12.20 p. m., 4.35 p. m.; Sunday only, 7.05 a. m., 6.15 p. m.

The time required for passage from one terminal to the other is 1 hour and 45 minutes.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 121.

PORT OF CRISTOBAL.—Continued.

		* ARRIVALS.		* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
September 28	Inapaquina ¹⁵	A. Tagarapulos	Colon, Rep. of Panama.	September 26	Annetta I. ¹⁵	A. Tagarapulos	Colon, Rep. of Panama.
September 28	Annetta I. ¹⁵	A. Tagarapulos	Colon, Rep. of Panama.	September 26	United Fruit Co.	United Fruit Co.	Colon, Rep. of Panama.
September 28	Amechucuna ¹⁵	United Fruit Co.	Colon, Rep. of Panama.	September 27	Diez & Garcon	Diez & Garcon	Colon, Rep. of Panama.
September 27	Heredin	United Fruit Co.	New Orleans and waypts.	September 27	Dora K. ¹⁶	Bluefields and Limon.	Bluefields and Limon.
September 27	Neuva Espagna ¹⁵	A. L. Sirazon	Colon, Rep. of Panama.	September 27	Escipe Fuego ¹⁵	Bluefields, Nicaragua.	Bluefields, Nicaragua.
September 27	No. 9685 ¹⁷	Pan American Airways	Colon, Rep. of Panama.	September 27	Tela	United Fruit Co.	New Orleans and waypts.
September 27	No. 9137 ¹⁷	Pan American Airways	San Salvador and waypts.	September 27	Atlanta	Standard Fruit & S. Co.	New Orleans and waypts.
September 27	No. 144-M ¹⁷	Pan American Airways	Manzanillo and waypts.				
September 27	No. 300-N ¹⁷	Pan American-Graze Airways	Ph. Cabello and waypts.				
			Talara via wayports.				
			¹⁵ Motor ship.				
			¹⁷ Air mail carrier.				
			PORT OF BALBOA.				
September 21	Montebello ¹⁵	Union Oil Co. of Calif.	Los Angeles, Calif.	September 23	Montebello ¹⁵	Union Oil Co. of Calif.	Los Angeles, Calif.
September 22	City of San Francisco ¹⁶	Panama Mail S. S. Co.	Buenaventura, Colombia.	September 27	City of San Francisco ¹⁶	Panama Mail S. S. Co.	San Francisco, Calif.

* Other than ships passing through the Canal.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., October 8, 1930. No. 10.

Tanker Traffic Through the Panama Canal in September, 1930.

During the month of September, 1930, 94 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 533,209, on which tolls of \$467,342.51 were paid. Cargo amounted to 466,264 tons. In point of net tonnage, tanker traffic decreased 15.2 per cent as compared with tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 1.9 per cent.

Tank vessels comprised 20.5 per cent of the total commercial transits through the Canal during the month; made up 23 per cent of the total Panama Canal net tonnage; were the source of 22.7 per cent of the tolls collected; and carried 22.6 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of September, 1930, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for September, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	11	52,699	\$39,691.52	1,359
Danzig.....	3	29,632	14,855.04	
French.....	1	5,068	3,648.96	
German.....	1	4,435	3,193.20	
Norwegian.....	6	33,127	23,916.24	
Swedish.....	2	14,174	10,205.28	
United States.....	26	153,012	114,492.53	11,882
Total, September, 1930.....	50	283,237	209,912.77	16,241
Total, August, 1930.....	49	273,990	205,959.11	41,415
Total, July, 1930.....	51	281,690	202,949.10	
Total, September, 1929.....	52	282,383	207,007.88	11,600
<i>Pacific to Atlantic.</i>				
Belgian.....	1	4,976	5,710.00	9,560
British.....	7	35,358	36,140.99	59,241
Danzig.....	1	6,310	6,682.50	11,300
French.....	1	6,997	8,288.40	11,505
German.....	1	4,340	4,792.50	8,160
Italian.....	1	4,320	4,626.25	7,292
Norwegian.....	6	31,427	33,250.00	58,595
United States.....	26	156,334	158,029.10	284,400
Total, September, 1930.....	44	249,972	257,429.74	450,023
Total, August, 1930.....	46	252,114	255,990.30	449,022
Total, July, 1930.....	69	375,067	385,446.00	688,237
Total, September, 1929.....	49	267,364	270,361.74	465,053

The following tabulation shows the tanker traffic through the Canal during September, 1930, classified according to trade routes:

ATLANTIC TO PACIFIC.

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal	25	153,728	\$114,930.98	11,882
United States to South America	2	7,652	5,509.44	.....
United States to Hawaii	1	4,286	3,085.92	.....
Canada to United States	1	3,719	2,754.75	.....
Canada to South America	2	12,995	9,356.40	.....
West Indies to United States	1	6,050	4,356.00	.....
Europe to United States	14	73,165	52,711.59	.....
Europe to South America	4	21,642	17,207.69	4,359

PACIFIC TO ATLANTIC.

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal	22	126,352	\$126,452.25	230,534
United States to West Indies	3	16,815	18,939.35	29,815
United States to Europe	14	78,473	83,402.15	142,408
South America to United States	1	4,326	4,633.75	7,966
South America to Canada	2	13,804	14,517.50	28,000
South America to Central America	1	3,892	2,802.24	.....
South America to Europe	1	6,310	6,682.50	11,300

Of the tanker traffic passing through the Canal in September, 1930, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for September, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tolls of cargo.
<i>Atlantic to Pacific.</i>				
September, 1930	36	210,397	\$152,995.07	7,909
August, 1930	33	193,994	139,567.59	.....
July, 1930	45	248,984	179,400.78	.....
September, 1929	39	212,663	153,455.82	.....
<i>Pacific to Atlantic.</i>				
September, 1930	29	166,508	169,483.10	300,859
August, 1930	33	183,370	185,721.60	325,811
July, 1930	56	302,142	307,081.25	545,893
September, 1929	37	206,294	208,351.65	363,120

New Vessels for Panama Mail Steamship Company.

The Panama Mail Steamship Company announces that plans and specifications have been prepared for the construction of 4 new liners for the passenger and freight service of that company between California, Central America, and New York, via the Panama Canal. It is stated that the vessels are to cost approximately \$5,000,000 each and are to be ready for service within 22 months. Specifications call for turbo-electric drive to give a speed of 18 knots, and the plans show that the ships are to be 500 feet long, 70 feet beam, and 39 feet deep, with accommodations for 200 first-class passengers.

Traffic by Nationality for September, 1930.

The following tabulation shows the commercial traffic through the Canal during the month of September, 1930, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for September, 1929 and 1928:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British	65	331,255	244,198	404,824	246,724	\$276,992.07	157,452
Chilean	1	4,705	3,466	7,310	3,976	4,332.50	1,545
Colombian	4	574	554	880	550	673.70	800
Danish	3	17,845	12,391	20,940	12,938	15,488.75	9,490
Danzig	3	20,632	15,989	26,847	15,144	14,855.04	.....
Dutch	5	26,244	17,802	29,935	17,876	22,252.50	9,872
French	6	32,991	24,213	39,755	24,028	26,996.93	7,529
German	15	59,760	39,963	67,256	40,287	47,787.05	33,294
Italian	3	19,872	12,929	24,334	14,695	15,216.29	4,119
Japanese	8	44,496	35,890	56,442	35,695	44,862.50	49,870
Norwegian	13	73,759	53,380	88,647	52,630	52,866.29	28,341
Panamanian	1	6,955	3,998	7,044	3,988	4,997.50	3,944
Swedish	6	32,019	25,055	50,135	29,396	24,887.15	12,006
United States	104	550,967	421,416	686,331	419,255	473,434.53	277,327
Yugoslav	1	3,674	3,859	6,403	3,852	4,085.28	.....
Total, September, 1930.	238	1,227,748	915,053	1,517,083	921,034	1,029,728.08	595,589
Total, September, 1929.	278	1,277,640	981,844	1,621,511	988,574	1,105,577.70	746,289
Total, September, 1928.	253	1,215,633	933,111	1,538,276	936,935	1,061,240.88	709,654

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	1	4,976	4,568	7,138	3,988	\$5,710.00	9,560
British	46	236,368	177,026	293,679	178,407	219,879.74	278,221
Chilean	1	4,705	3,466	7,310	3,976	4,332.50	2,225
Colombian	5	737	718	1,113	716	796.70	373
Danish	4	16,947	14,201	21,428	14,254	17,751.25	25,808
Danzig	1	6,310	5,346	8,940	5,050	6,682.50	11,300
Dutch	3	9,668	5,876	9,778	5,601	7,345.00	13,692
French	4	25,035	19,640	30,870	20,047	24,472.15	31,878
German	15	58,988	41,607	69,484	41,847	52,008.75	81,753
Italian	3	17,833	13,587	25,528	14,153	16,983.75	17,750
Japanese	7	35,624	31,277	45,732	30,949	38,598.60	47,341
Norwegian	21	88,635	64,498	107,398	64,288	80,622.50	144,347
Panamanian	3	7,073	4,069	6,710	4,163	5,080.95	5,472
Swedish	1	4,496	3,743	15,337	4,385	4,678.75	21,800
United States	104	565,522	430,384	696,703	430,110	537,558.61	762,573
Yugoslav	1	3,759	3,899	6,361	3,850	4,873.75	9,900
Total, September, 1930.	220	1,086,676	823,905	1,353,509	825,784	1,027,375.50	1,463,993
Total, September, 1929.	245	1,147,621	870,696	1,436,521	873,097	1,096,211.70	1,686,494
Total, September, 1928.	234	1,079,420	837,984	1,371,178	840,189	1,049,989.68	1,603,357

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	1	4,976	4,568	7,138	3,988	\$5,710.00	9,560
British	111	567,623	421,224	698,503	425,131	496,871.81	435,673
Chilean	2	9,410	6,932	14,620	7,952	8,665.00	3,770
Colombian	9	1,311	1,272	1,933	1,266	1,470.40	1,173
Danish	7	34,792	25,592	42,368	27,192	33,240.00	35,298
Danzig	4	26,942	21,335	35,787	20,194	21,537.54	11,300
Dutch	8	35,912	23,678	39,713	23,477	29,597.50	23,564
French	10	58,026	43,853	70,625	44,075	51,469.98	39,407
German	30	118,743	81,570	136,740	82,134	99,795.80	115,047
Italian	6	37,705	26,516	49,862	28,848	32,200.04	21,869
Japanese	15	80,120	67,167	102,174	66,644	83,461.10	97,211
Norwegian	34	162,394	117,828	196,045	116,913	133,488.79	172,688
Panamanian	4	14,028	8,067	13,754	8,151	10,078.45	9,416
Swedish	7	36,515	28,798	65,472	33,781	29,565.90	33,806
United States	208	1,116,489	851,800	1,383,034	849,365	1,010,993.14	1,039,900
Yugoslav	2	9,433	7,758	12,764	7,702	8,959.03	9,900
Total, September, 1930.	458	2,314,424	1,738,958	2,870,592	1,746,818	2,057,403.58	2,059,582
Total, September, 1929.	523	2,425,261	1,852,540	3,058,032	1,861,671	2,201,789.40	2,432,783
Total, September, 1928.	487	2,295,053	1,771,095	2,909,454	1,777,124	2,111,230.56	2,313,011

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, October 4, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day	Hour	Day	Hour	Day	Hour	Day	Hour								Nature.	Tons.	Gross.	Net.
Javanese	27	21.00	28	6.15	23	12.45	28	13.50	British	Princes Line, Ltd.	441.0	60.0	20.0	New York, N. Y.	Manila, P. I.	General	2,806	9,240	6,145
Creole Jefe	27	16.00	28	7.10	28	14.07	28	18.16	Venezuelan	West India Oil Co.	325.0	55.0	11.3	Maracaibo, Venezuela	Bahoa, C. Z.	Ballast	3,740	3,984	2,612
Point Arena	28	9.35	28	9.45	28	17.30	28	18.56	American	Swayne & Hoyt.	324.0	46.2	23.0	New Orleans, La.	San Francisco, Cal.	General, steel	3,740	4,387	3,151
Woodburn	28	10.30	28	10.40	28	17.38	28	18.56	British	British S. S. Co.	355.0	48.0	15.0	Boston, Mass.	Arica, Chile	Ballast	8,241	7,611	5,450
Steel Ranger	28	10.45	28	10.55	28	18.10	28	22.40	American	Isthmian S. S. Lines	424.0	56.2	25.11	Mobile, Ala.	Seattle, Wash.	General	8,241	7,611	5,450
Mahana	28	4.10	28	12.45	28	19.53	28	21.13	British	Shaw, Savill & Albion	500.0	63.3	29.5	Liverpool, England	Pt. Chalmers, N. Z.	General	5,434	12,083	8,503
Clunepark	28	19.00	28	20.15	29	9.13	29	11.27	British	J. & J. Denholm	350.0	49.0	13.0	Newport, News, Va.	Arica, Chile	Ballast	3,924	2,658	1,835
Lebore	28	12.20	29	6.05	29	13.06	29	14.15	American	Ore S. S. Corp.	549.6	72.2	21.8	Baltimore, Md.	Cruz Grande, Chile	Ballast	14,925	4,835	4,835
Mambatan	28	23.10	29	6.10	29	13.44	29	14.50	American	Redwood Line	386.0	52.0	19.0	New Orleans, La.	Seattle, Wash.	General	4,223	5,696	4,125
Penelope	29	00.10	29	7.20	29	14.27	29	21.31	Danzig	W. Tankerschiff Rhederei	470.0	63.0	18.3	Hamburg, Germany	Talara, Peru	Ballast	9,302	6,127	4,127
Eagle	29	0.45	29	7.25	29	14.47	29	15.45	American	Standard Oil Co.	410.0	56.0	21.6	New York, N. Y.	Los Angeles, Calif.	Ballast	8,201	6,226	4,226
Vistula	29	2.05	29	8.25	29	15.37	29	16.50	Danzig	Standard Oil Co.	493.0	64.0	20.3	New York, N. Y.	Los Angeles, Calif.	Ballast	10,604	8,167	5,167
Greylock	29	6.23	29	8.45	29	16.26	29	17.45	American	Isthmian S. S. Lines	430.7	54.3	25.3	Baltimore, Md.	Seattle, Wash.	Steel, general	7,781	7,046	5,698
Demark	29	9.00	29	9.40	29	16.57	29	19.00	British	J. & J. Denholm	350.0	49.0	13.6	Norfolk, Va.	Arica, Chile	Ballast	3,924	2,658	1,835
Barnbek	28	23.45	29	9.55	29	16.55	29	18.00	German	Knober & Burehard	307.0	45.3	14.0	Boston, Mass.	Yavaros, Mexico	Ballast	3,294	2,356	1,356
Albert	29	3.30	29	14.40	29	21.36	29	22.50	German	Hamburg-American Line	409.8	54.0	18.9	Hamburg, Germany	Valparaiso, Chile	General	2,781	7,173	5,514
Vino Tinto	29	18.00	29	8.36	29	8.36	29	8.36	American	Stand. Fruit & S. S. Co.	.....	.....	.....	Cristobal, C. Z.	Gatun, C. Z.	.....	.....	.....
No. 18, C. Z.	29	.....	29	.....	29	.....	29	.....	American	Stand. Fruit & S. S. Co.	.....	.....	.....	Cristobal, C. Z.	Gatun, C. Z.	.....	.....	.....
No. 20, C. Z.	29	.....	29	.....	29	.....	29	.....	American	Stand. Fruit & S. S. Co.	.....	.....	.....	Cristobal, C. Z.	Gatun, C. Z.	.....	.....	.....
No. 3843	29	.....	29	.....	29	.....	29	.....	American	Stand. Fruit & S. S. Co.	.....	.....	.....	Cristobal, C. Z.	Gatun, C. Z.	.....	.....	.....
Willizo	30	5.30	30	6.15	30	13.46	30	14.50	American	Stand. Fruit & S. S. Co.	415.0	55.7	20.0	Baltimore, Md.	Gatun, C. Z.	Unknown	16	16	16
Hague Maru	30	6.40	30	8.40	30	16.38	30	18.30	Japanese	Williams S. S. Line	407.3	59.0	10.23	New York, N. Y.	Gatun, C. Z.	General	3,500	7,731	5,805
Ohoano	30	7.55	30	8.25	30	15.12	30	16.15	American	Osaka Shosen Kaisha	404.0	53.7	20.0	Boston, Mass.	Seattle, Wash.	Cotton, resin	5,540	4,533	4,772
Capella	29	22.25	30	10.40	30	17.28	30	18.48	Swedish	Amer-Hawaiian Line	487.0	64.0	20.6	Gothenburg, Sweden	Tacoma, Wash.	General	2,808	7,103	4,991
Western	30	17.50	30	18.05	1	11.30	1	12.55	American	Chile S. S. Co.	480.0	60.0	20.6	Chester, Pa.	Los Angeles, Calif.	Ballast	9,801	6,800	4,800
Sun	30	5.05	1	6.10	1	12.50	1	14.55	Dutch	Sun Oil Co.	447.0	62.5	20.5	Amsterdam, Holland	Los Angeles, Calif.	Ballast	3,170	9,505	6,551
Alkmaar	30	22.00	1	7.25	1	13.50	1	14.55	British	Vacuum Pet. S. S. Co.	380.0	53.6	15.3	Bremen, Germany	Valparaiso, Chile	General	3,170	9,505	6,551
Voco	30	23.15	1	7.25	1	14.12	1	15.55	Danish	DuPont de Nemours	460.0	53.6	15.3	Chester, Pa.	Los Angeles, Calif.	Ballast	2,750	6,190	4,569
Nordbo	1	4.15	1	7.30	1	15.02	1	16.20	British	Empire Shipping Co.	390.0	53.5	16.0	Montreal, Canada	Talcahuano, Chile	General	2,750	6,190	4,569
Waziristan	1	4.15	1	7.30	1	15.02	1	16.20	British	Empire Shipping Co.	390.0	53.5	16.0	Montreal, Canada	Vancouver, B. C.	Ballast	2,750	6,190	4,569
Lillian	1	7.05	1	8.05	1	15.10	1	16.20	American	Lukenbach Line	448.0	60.2	22.4	Boston, Mass.	Seattle, Wash.	General	4,000	9,294	6,865
Lukenbach	1	7.05	1	8.05	1	15.10	1	16.20	American	Lukenbach Line	448.0	60.2	22.4	Boston, Mass.	Seattle, Wash.	General	4,000	9,294	6,865
Swan	1	11.35	1	11.45	1	16.52	1	19.48	British	U. S. Navy	395.5	54.0	16.0	Cristobal, C. Z.	Bahoa, C. Z.	Ballast	.....	.....	.....
Badjeetan	1	11.35	1	11.45	1	16.52	1	19.48	British	Common Brothers	395.5	54.0	16.0	Greenock, England	Vancouver, B. C.	Ballast	.....	.....	.....

* Mine sweeper.

‡ Barge.

§ Launch, towing barges.

¶ For dry docking.

‡ Motor ship.

† Tanker.

Modavia	29	17	25	1	13	25	1	14	30	1	21	00	British	Donaldson Brothers	387	0	53	6	15	0	Glasgow, Scotland	Vancouver, B. C.	General, bananas	735	6,710	4,979
South Barbara	1	9	28	1	13	39	1	10	28	2	00	10	American	Grace Line	466	0	64	0	23	1	Vapraingo, Chic.	General	1,879	10,637	6,653	
San Pedro	1	6	25	1	14	10	1	21	16	1	22	28	American	Quaker Line	395	0	55	0	21	0	Seattle, Wash.	General	4,206	7,350	5,253	
John F.	1	10	35	1	14	30	1	21	35	1	22	45	Norwegian	Anglo-Saxon Pet. Co.	420	8	58	5	20	4	Los Angeles, Calif.	Ballast	6,669	4,317		
Theodore	1	15	00	1	18	00	2	9	30	2	11	05	Norwegian	Fred Olsen & Co.	425	0	55	0	16	2	Vancouver, B. C.	Iron, general	2,123	7,593	5,637	
San Zoticus	1	20	15	2	11	37	2	12	45	2	12	45	British	Anglo-Saxon Oil-Ship Co.	425	0	52	0	05	0	Valparaiso, Chile	Fuel oil	7,603	5,032	3,892	
Miriam	1	21	15	2	9	03	2	13	36	2	15	00	French	Anglo-Saxon Pet. Co.	425	0	57	0	17	0	Los Angeles, Calif.	Ballast	7,178	5,072		
Jersey City	1	21	40	2	10	10	2	14	24	2	15	40	American	Sir W. R. Smith & Sons	411	6	55	0	15	0	Vancouver, B. C.	Ballast	6,952	5,005		
Rochester	2	5	30	2	12	40	3	18	30	3	18	30	American	U. S. Navy	380	0	64	0	27	6	Balboa, C. Z.	Ballast	2,955	7,984	5,372	
Andromed	2	10	10	3	6	00	3	13	04	3	14	15	French	Messageries Maritimes	430	0	57	0	33	0	Naumen, New Calif.	General	7,984	5,372		
Chiloff	2	21	35	3	6	15	3	13	52	3	14	55	American	Paine & Clooney	391	8	51	0	21	0	Los Angeles, Calif.	Ballast	5,549	3,955		
President	3	4	05	3	7	20	3	14	35	3	21	38	American	Dollar Line	502	0	62	0	26	5	San Francisco, Cal.	General	3,328	12,023	8,495	
Van Buren	3	6	00	3	7	30	3	15	47	4	1	10	American	Panama-Pacific Line	586	0	30	0	26	6	San Francisco, Cal.	General	3,600	25,262	18,194	
Pensylvania	2	21	05	3	8	20	3	17	59	4	10	15	American	Ship Trust Co., Inc.	590	0	39	0	20	8	Honolulu, T. H.	General	2,389	1,802	1,646	
Westwind	2	22	15	3	8	10	3	16	32	3	18	00	British	P. N. & J. N. Carranza	210	3	32	0	12	5	Buenaventura, Col.	Cattle	138	1,346	806	
Beest Caetus	3	3	35	3	9	30	3	17	45	3	18	55	American	McCormick S. S. Co.	410	5	40	0	22	10	Vancouver, B. C.	General	6,578	6,628	5,046	
Pueblo	3	6	30	3	9	45	3	18	56	3	18	56	American	Riofield Oil Co.	340	0	49	0	18	6	Los Angeles, Calif.	Ballast	4,613	2,990		
Guldberg	3	6	55	3	10	45	3	18	48	3	22	16	Danish	C. K. Hansen	385	6	44	0	15	0	New York, N. Y.	Ballast	6,736	5,064		
Dalbair	3	11	15	3	11	55	3	20	08	3	21	38	British	United Steam Nav. Co.	409	5	54	1	15	0	Vancouver, B. C.	Ballast	6,124	4,008		
Canea	30	15	20	3	11	46	3	20	08	4	12	15	Colombian	National Navigation Co.	107	0	22	0	9	0	Buenaventura, Col.	General	120	238	163	
Innesmoor	3	12	15	3	13	10	3	21	18	4	7	42	British	W. Ruineiman & Co.	375	0	53	0	23	0	Thio, N. Caledonia	Coal and coke	6,000	6,065	4,615	
Comlebank	3	12	45	3	15	00	3	22	05	3	11	52	British	Bank Line, Ltd.	419	0	54	0	22	0	Seikoshin, China	General	5,932	7,097	4,993	
King Edwin	3	16	40	3	19	30	4	9	41	4	13	20	British	Empire Shipping Co.	400	0	48	0	15	0	Vancouver, B. C.	Ballast	6,474	4,686		
Cambrai	2	23	45	3	20	05	4	13	37	4	14	35	American	Panama R. R. S. S. Line	251	0	58	2	24	8	San Francisco, Cal.	General	189	2,873	1,776	
Buenaventura	2	23	45	4	6	05	4	13	37	4	14	35	American	Standard Transp. Co.	431	0	43	0	16	0	Guayaquil, Ecuador	General	564	7,846	5,112	
Lio	3	5	55	4	6	15	4	16	18	4	17	30	American	Andrew Weir & Co.	406	5	51	3	24	10	Los Angeles, Calif.	Ballast	7,100	6,155	4,497	
Parracombe	3	18	15	4	7	30	4	15	45	4	17	10	British	Fern Line	367	0	51	3	23	6	Singapore, China	Sugar	6,470	5,404	3,970	
Sorward	3	21	35	4	7	30	4	15	29	4	21	30	Norwegian	Blue Star Line	420	0	54	7	19	0	Brisbane, Australia	General	7,521	5,852		
Gothagar	3	23	30	4	8	50	4	16	59	4	18	00	British	Humburg American Line	227	0	47	0	13	5	Vancouver, B. C.	Ballast	172	1,633	1,041	
Durazzo	30	18	40	4	9	30	4	17	53	4	18	55	German	Nelson Line	324	0	46	0	20	0	Cristobal, C. Z.	General	2,300	3,985	2,630	
Buffalo Bridge	4	6	10	4	9	30	4	18	50	4	20	10	American	Pacific Steam Nav. Co.	215	7	34	0	16	5	San Francisco, Cal.	General	980	1,273	706	
Acajula	1	19	35	4	11	05	4	18	50	4	20	20	British	Amer.-Hawaiian Line	407	7	53	7	21	0	Champierco, Guat.	General	4,476	7,150	5,024	
Minnesota	4	12	25	4	12	45	4	19	17	4	20	20	American	Imperial Oil Co.	510	2	67	2	21	0	Portland, Oreg.	General	3,188	8,547	6,646	
City of Adelaide	4	14	00	4	14	05	4	21	34	5	7	30	British	Ellerman Lines	433	0	58	2	20	0	Brisbane, Australia	General, oil	11,572	7,648		
Victrola	4	14	38	4	14	50	4	22	49	5	18	20	British	Imperial Oil Co.	510	2	67	2	21	0	Talara, Peru	Ballast	11,572	7,648		

10 Pig iron and sulphate ammonia.

9 Transport.

8 Sailing ship.

7 Cruiser.

6 Tanker.

11 THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Invisible	27	15	35	28	6	28	28	14	05	28	14	05	American	Amer. Gulf Orient Line	440	1	56	0	26	0	Manila, P. I.	New Orleans, La.	General	9,368	8,329	6,157
Point San Pablo	27	15	45	28	6	51	28	14	45	28	14	45	American	Swayne & Hoyt	324	0	46	2	22	0	Vancouver, B. C.	New Orleans, La.	Lumber, general	3,508	3,994	2,591
Baron	27	19	00	28	6	56	28	14	45	28	15	55	British	Hogarth Shipping Co.	340	8	48	7	19	0	Lobos de Tierra	London, England	Guano	3,500	3,940	2,960
Lubralfol	27	17	45	28	7	20	28	15	55	28	15	55	Belgian	Soc. Anonyme d'Arme	440	8	57	4	27	0	San Francisco, Cal.	Antwerp, Belgium	Gas oil	9,559	7,615	4,976

12 Motor ship.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam, water draft.		From—	For—	Cargo.	Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Tons.	Gross.				Net.	
Malang	28	00 45	28	7 39	28	16 30	28	16 30	American	Mallory Transp. Line	344.8	50.1	22.0	Tacoma, Wash.	New York, N. Y.	Lumber	4,500	4,339
T. J. Williams	28	4 30	28	8 14	28	17 10	28	17 10	American	Standard Shipping Co.	465.4	60.2	28.2	Lobitos, Peru	Halifax, N. S.	Crude oil	11,600	8,585
Pacific Commerce	28	14 30	28	8 50	28	17 30	28	17 30	British	Canadian Transp. Co.	420.0	54.0	25.0	Brentwood Bay, B.C.	Belfast, Ireland	Lumber, general	6,025	6,996
Nora	28	14 35	28	15 25	29	00 10	29	00 10	American	Grace Line	467.5	62.7	30.0	Los Angeles, Calif	Habana, Cuba	Fuel, Diesel oil	7,379	9,918
San Quirino	28	19 30	28	6 21	29	13 45	29	13 45	British	Anglo-Mexican Pet. Co.	407.2	52.2	24.0	Los Angeles, Calif	Lizards, England	Sugar	7,545	5,176
Gudrun Maersk	28	3 00	29	6 25	29	15 35	29	15 35	Danish	Isbrandtsen Moller	362.2	51.4	24.0	Hilo, P. I.	Providence, R. I.	Gasoline	5,705	2,575
Alvarado	29	6 45	29	8 02	29	15 25	29	00 50	British	Pacific Steam Nav. Co.	303.0	43.0	13.3	Callao, Peru	New York, N. Y.	General	8,289	2,844
Santa Teresa	29	8 55	29	9 40	29	16 35	29	00 05	American	Grace Line	360.2	51.6	23.0	Talcahuano, Chile	New York, N. Y.	General	3,283	5,726
California	29	14 30	29	6 09	30	13 10	30	14 00	American	Panama-Pacific Line	574.4	80.3	30.2	San Francisco, Calif	New York, N. Y.	General	8,963	24,506
Chesler Sun	29	17 30	30	6 55	30	14 15	30	15 40	American	Sun Oil Co.	480.5	66.0	28.0	Port Angeles, Calif	Philadelphia, Pa.	Gasoline	13,142	9,607
Heffron	29	19 41	30	7 30	30	15 20	30	15 50	American	Heffron S. S. Co.	440.0	56.0	28.0	Lonsview, Wash.	Newark, N. J.	Lumber	9,660	8,312
F. J. Cauca	30	7 00	30	7 31	30	15 20	30	15 20	Colombian	National Navigation Co.	107.0	22.9	9.3	Buenaventura, Col	Cristobal, C. Z.	Lumber	61	238
Lockenbach	30	5 40	30	8 07	30	15 45	30	15 45	American	Lukenbach Line	446.0	56.1	30.0	Portland, Ore.	Boston, Mass	Lumber, general	9,253	8,508
Columbian	30	6 23	30	8 31	30	16 20	30	16 20	American	Amer-Hawaiian Line	404.6	54.0	28.0	Portland, Ore.	Boston, Mass	General	7,336	6,790
Canadian	30	6 30	30	8 45	30	16 55	30	20 30	British	Can. Nat. Steamships	430.0	55.0	16.0	Dunedin, N. Z.	Montreal, Canada	General	701	7,680
Tamaho Maru	30	6 45	30	9 20	30	17 50	30	18 40	Japanese	Kokusai Kisen Kaisha	425.0	55.6	29.0	Vancouver, B. C.	Naples, Italy	Wheat	4,574	6,899
Willkeno	30	6 43	30	9 40	30	17 55	30	17 55	American	Williams S. S. Corp.	217.5	55.6	26.0	Seattle, Wash.	Baltimore, Md	General	5,320	7,750
Durazzo	30	7 00	30	10 09	30	18 40	30	17 55	German	Hamburg-American Line	425.0	34.4	13.5	Guayaquil, Ecuador	Cristobal, C. Z.	General	5,501	1,632
Clan Ogilvy	30	7 29	30	10 46	30	20 35	30	23 20	British	Clan Line, Ltd.	430.0	54.2	25.0	Cairns, Australia	Liverpool, England	General	7,250	6,879
Calgarolite	30	5 00	30	13 54	30	21 30	30	21 30	British	Imperial Oil Co., Ltd.	521.5	70.4	30.0	Talera, Peru	Halifax, N. S.	Crude oil	16,409	12,339
Steel Age	30	16 10	30	10 55	1	12 35	1	12 35	American	Norton, Lilly & Co.	395.5	55.0	28.0	Port Alice, B. C.	Baltimore, Md	Lumber, general	7,910	7,330
Australien	30	14 50	30	17 36	1	13 45	1	14 50	Danish	East Asiatic Co.	410.0	55.2	28.3	Vancouver, B. C.	Copenhagen, Den	Lumber, general	8,569	7,031
Despatch	30	9 30	1	6 12	1	13 55	1	13 55	British	British Admiralty	472.0	46.0	16.4	San Diego, Calif	Kingston, Jamaica	General	4,017	7,761
Teno	30	19 15	1	6 44	1	15 30	1	17 55	Chilean	Cia Sud. Armer. de Yap	421.8	56.0	25.0	Valparaiso, Chile	New York, N. Y.	Wheat	7,920	6,212
Hofuku Maru	30	22 00	1	7 02	1	17 55	1	22 10	Japanese	Kokusai Kisen Kaisha	385.0	51.0	27.0	Yokohama, Japan	Fayaal	General	4,017	7,761
Whitton	30	24 00	1	8 09	1	18 20	1	18 20	American	Union Sulphur Co.	355.0	51.0	25.2	Tacoma, Wash.	New York, N. Y.	Lumber	5,200	5,367
Acapulco	1	2 30	1	8 17	1	19 35	1	19 35	British	Pacific Steam Nav. Co.	215.7	33.6	14.0	Champerico, Guat.	Cristobal, C. Z.	General	447	1,273
Carpe Horn	1	5 25	1	8 57	1	19 35	1	19 35	British	Lyle Shipping Co.	425.0	56.0	26.0	Seattle, Wash.	Liverpool, England	General	8,352	6,813
Barneveld	1	16 50	1	17 51	2	11 18	3	00 50	Dutch	Royal Neth. S. S. Co.	400.9	58.2	26.0	Corral, Chile	Hamburg, Germany	Nitrate, general	8,235	7,829
Lochgoil	1	18 15	1	18 52	2	11 45	2	15 37	British	Royal Mail S. P. Co.	485.6	62.3	29.0	Vancouver, B. C.	Rotterdam, Holland	General	9,312	10,803
Atlantic Star	1	1 30	2	6 23	2	13 50	2	13 50	American	Sun Oil Co.	429.3	59.2	25.0	Los Angeles, Calif	Miami, Fla.	Gasoline	9,198	7,567
Pacific Fir	2	3 29	2	7 23	2	16 30	2	16 30	American	Dixon S. S. Corp.	410.5	54.0	24.0	Seattle, Wash.	Norfolk, Va.	General	7,895	6,624
Tacoma	2	5 10	2	7 36	2	15 30	3	1 10	German	Hamburg-American Line	477.7	63.0	37.2	Vancouver, B. C.	Hamburg, Germany	Lumber, general	8,272	10,277
Barat	2	7 00	2	8 12	2	16 50	5	6 05	Dutch	Royal Neth. S. S. Co.	202.9	33.1	12.3	Buenaventura, Col.	Cristobal, C. Z.	General	258	1,182

¹ Tanker. ² Motor ship. ³ Cruiser. ⁴ For orders. ⁵ Coffee and cylinders. ⁶ Coffee, cocoa, and ivory nuts. ⁷ Wheat, barley, and general. ⁸ Coffee, hides, and wood. ⁹ Coffee, cacao, rice, and sugar. ¹⁰ Coffee, rice, and sugar. ¹¹ Coffee, cacao, rice, and sugar. ¹² Coffee, cacao, rice, and sugar. ¹³ Coffee, cacao, rice, and sugar. ¹⁴ Coffee, cacao, rice, and sugar. ¹⁵ Coffee, cacao, rice, and sugar. ¹⁶ Coffee, cacao, rice, and sugar. ¹⁷ Wheat, barley, and general. ¹⁸ Coffee, cacao, rice, and sugar. ¹⁹ Coffee, cacao, rice, and sugar. ²⁰ Coffee, cacao, rice, and sugar. ²¹ Coffee, cacao, rice, and sugar. ²² Coffee, cacao, rice, and sugar. ²³ Coffee, cacao, rice, and sugar. ²⁴ Coffee, cacao, rice, and sugar. ²⁵ Coffee, cacao, rice, and sugar. ²⁶ Coffee, cacao, rice, and sugar. ²⁷ Coffee, cacao, rice, and sugar. ²⁸ Coffee, cacao, rice, and sugar. ²⁹ Coffee, cacao, rice, and sugar. ³⁰ Coffee, cacao, rice, and sugar.

Origin	Destination	Ship	Company	Agent	Remarks
Calli	London, England	General	972	1,105	
Pacific Maru	London, England	General	6,470	6,251	
El Lobo	Philadelphia, Pa.	Crude oil	6,090	4,851	3,326
Chateau	Brooklyn, N. Y.	General	349		
Munindes	Philadelphia, Pa.	Lumber, general	6,000	5,325	4,187
Birmingham	Avonmouth, Eng.	(*)	7,938	7,304	5,188
Oakworth	W. Hartlepool, Eng.	Lumber, general	5,000	5,615	3,757
San Marcos	Wilmington, Del.	Lumber, general	6,019	6,755	4,895
Charles Nelson	New York, N. Y.	Lumber, general	5,503	5,659	4,329
Wagland	Hamburg, Germany	General	7,697	6,573	4,629
Dakota	Boston, Mass.	General	7,672	7,155	5,094
Cape Orizaba	Hill, England	Wheat, lumber	7,484	5,650	4,071
Dauntless	Kings-Island, Jamaica	Gas line	9,320	7,394	5,099
Hugenot	New York, N. Y.	Gasoline	13,554	7,394	5,099
San	Chesler, Pa.	General	1,130	2,874	1,944
Guayquil	New York, N. Y.	General	9,031	7,481	5,212
Nagara	Castrol, C. Z.	Gasoline			
Mefon	New York, N. Y.	Gasoline	7,449	6,192	4,347
San	Lovds End, Eng.	Lumber	6,298	6,615	4,966
Macdonio	New York, N. Y.	General	6,420	8,508	6,648
Jane	Portland, Oreg.	Nitrate of soda	7,950	6,252	4,558
Christenson	Portland, Oreg.	General			
Edgar F.	Mobile, Ala.	Crude oil	10,121	9,474	6,480
Lukenbach	Wilmington, Del.	Ballast	7,406	6,433	4,329
Nordpool	Wilmington, Del.	General	7,911	121	
Hilda	Vallo, Norway	Crude oil	9,980	7,678	5,563
Knudsen	Chisobol, C. Z.	Ballast			
Lompoc	Chisobol, C. Z.	General			
Galdas	Chisobol, C. Z.	General			
Arkansas	Le Havre, France	General			

2 Tanker. 30 Survey ship. 31 Canned fish and barley. 32 Wheat, barley, and canned goods. 33 Air mail carrier. 34 Motor boat.

Date	Vessel	Line	From	Date	Vessel	Line	To
September 28	Ulha	United Fruit Co.	Port Limon, Costa Rica	September 28	No. 300-N	Pan American-Graze Airways	Talara via waypoints
September 28	Sayresant	Royal Netherlands S. S. Co.	Amsterdam and waypoints	September 28	No. 0963	Pan American Airways	San Salvador and waypoints
September 29	Calamars	United Fruit Co.	New York via Habana	September 28	No. 9770	Pan American Airways	Miami via waypoints
September 29	Cundinamarca	Scavia Alpine Co.	Barraquilla and waypoints	September 28	Ulha	United Fruit Co.	New York via Habana
September 30	Panama	Pan American Airways	San Salvador and waypoints	September 28	Cristobal	Panama R. R. S. S. Line	New York via Haiti
September 30	Magallanes	Spanish Line	Barcelona and waypoints	September 28	Hersedia	United Fruit Co.	New Orleans and waypoints
September 30	Pellerin de la Touche	French Line	Hayre and waypoints	September 29	Davisan	Pan American Airways	Liverpool and waypoints
September 30	No. 300-N	Pan American-Graze Airways	Talara via waypoints	October 1	No. 9033	Pan American Airways	San Salvador and waypoints
October 1	Irons	Hamburg-American Line	Hamburg via waypoints	October 1	No. 9137	Pan American Airways	Miami via waypoints
October 1	Magdalena	United Fruit Co.	Puerto Colombia	October 1	Atacama	Royal Netherlands S. S. Co.	Port Limon, Costa Rica
October 1	Zacapa	United Fruit Co.	New York via Kingston	October 1	Atacama	United Fruit Co.	Colon, Rep. of Panama

* ARRIVALS. * DEPARTURES. 35 Other than ships passing through the Canal.

PORT OF CRISTOBAL

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
October 1	Anachucina ²⁵	United Fruit Co.	Colon, Rep. of Panama.	October 1	Annetta I. ²⁵	A. Tagaropulos	Colon, Rep. of Panama.
October 1	Annetta I. ²⁵	A. Tagaropulos	Colon, Rep. of Panama.	October 1	Inapaquina ²⁵	United Fruit Co.	Colon, Rep. of Panama.
October 1	Inapaquina ²⁵	A. Tagaropulos	Colon, Rep. of Panama.	October 1	Calamares	Hamburg-American Line	Port Limon, Costa Rica.
October 1	Castilla	United Fruit Co.	New Orleans, La.	October 1	Magdalena	Pan American Airways	Port Limon, Costa Rica.
October 1	No. 9664 ²⁶	Pan American Airways	San Salvador and way pts.	October 2	No. 300-N ²⁶	Pan American Airways	Talara via wayports.
October 1	No. 142-M ²⁶	Pan American Airways	Miami via wayports.	October 2	No. 144-M ²⁶	Pan American Airways	Pto. Chaballo and way pts.
October 2	Delhian	Liverpool via wayports.	Liverpool via wayports.	October 2	Zacapa	United Fruit Co.	Managua, Rep. of Panama.
October 2	Baracoa	Colombian S. S. Line.	New York via wayports.	October 2	Castilla	United Fruit Co.	New York via wayports.
October 3	Stuyvesant	Standard Fruit & S. S. Co.	New Orleans and Habana.	October 2	Delhian	Leyland S. S. Line.	Port Limon, Costa Rica.
October 3	Magdalena	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	October 2	Pellern de la Tonche	French Line	Havre via wayports.
October 4	Camden	Hamburg-American Line	Port Limon, Costa Rica.	October 2	No. 998-N ²⁶	Pan American Airways	Panama, Rep. of Panama.
October 4	Cartago	United Fruit Co.	Curacao, D. W. I.	October 3	No. 9670 ²⁶	Pan American Airways	San Salvador and way pts.
October 4	No. 300-N ²⁶	Pan American Airways	New Orleans and Habana.	October 3	Cundinamarca C-53 ²⁶	Seata Airplane Co	Barranquilla and way pts.
October 4	No. 9885 ²⁶	Pan American Airways	Talara via wayports.	October 3	Baracoa	Colombian S. S. Line	New York via wayports.
October 4	Pearl Marie ²⁷	G. I. Bryan	San Salvador and way pts.	October 4	Pearl Marie ²⁷	G. I. Bryan	Bluefields, Nicaragua.
October 4			Colon, Rep. of Panama.	October 4	Irona	United Fruit Co.	New Orleans and way pts.
				October 4	Stuyvesant	Royal Netherlands S. S. Co.	Amsterdam and way pts.
				October 4	Amapala	Standard Fruit & S. S. Co.	New Orleans and way pts.

²⁵ Motor boat. ²⁶ Air mail carrier. ²⁷ Motor schooner.

PORT OF BALBOA.

September 28	Condor	Grace Line	Tacoma, Wash.	October 3	Condor	Grace Line	Valparaiso, Chile
September 29	Dos Hermanos ²⁷	A. Valdez	Panama Bay, R. P.	October 3	Dos Hermanos ²⁷	A. Valdez	Panama Bay, R. P.
October 3	La Union ²⁷	La Union	Panama Bay, R. P.	October 3	La Union ²⁷	La Union	Panama Bay, R. P.
October 3	Nueva Panama ²⁸	Nueva Panama	Panama Bay, R. P.	October 4	Nueva Panama ²⁸	Hans Elliot	Panama Bay, R. P.
October 3	Real ²⁷	Hans Elliot	Panama Bay, R. P.	October 4	Real ²⁷	Hans Elliot	Panama Bay, R. P.
October 3	Dos Hermanos ²⁷	A. Valdez	Panama Bay, R. P.	October 3	Dos Hermanos ²⁷	A. Valdez	Panama Bay, R. P.
October 3	La Perla	United Fruit Co.	San Francisco, Calif.	October 4	La Perla	United Fruit Co.	San Francisco, Calif.

²⁸ Motor ship.

* Other than ships passing through the Canal.

Comparison of Canal Traffic in September, 1930, with September Traffic in Previous Years.

The commercial traffic through the Panama Canal during the month of September, 1930, showed a slight decrease as compared with traffic in the preceding month, and an extensive decrease as compared with the corresponding month in 1929.

The 458 transits in September, 1930, are fewer by 65, or 12.4 per cent, than the 523 transits in September of last year, while the net tonnage (Panama Canal measurement), aggregating 2,314,424, was less by 110,837 tons, or 4.6 per cent, than the total of 2,425,261 tons in September, 1929. The cargo tonnage of 2,059,582 for September, 1930, shows a decline of 373,201 tons, or 15.3 per cent, from the total of 2,432,783 tons passing through the Canal in September, 1929.

In the tabulation below are shown the number of transits, net tonnage (Panama Canal measurement), and the tons of cargo carried through the Canal during the month of September each year from 1914 to 1930, inclusive, and for comparison, the monthly averages for the corresponding fiscal year ending on July 30th following:

Calendar year.	Month of September.			Fiscal year.	Average per month for fiscal year.		
	Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.		Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.
1914	¹ 56	217,527	323,094	1915	² 102	361,197	465,567
1915	101	350,291	464,647	1916	63	199,687	257,843
1916	153	503,645	645,046	1917	150	493,213	583,213
1917	183	573,166	724,172	1918	172	547,839	627,659
1918	179	523,341	548,489	1919	169	510,416	576,385
1919	170	586,186	638,270	1920	206	712,170	781,298
1920	256	1,008,785	1,009,557	1921	241	951,323	966,601
1921	221	925,137	754,394	1922	228	951,455	907,075
1922	240	1,070,410	1,138,188	1923	331	1,550,482	1,630,656
1923	413	2,044,552	2,168,703	1924	436	2,179,073	2,249,550
1924	395	1,976,213	2,112,264	1925	399	1,904,596	1,996,570
1925	338	1,831,039	1,891,988	1926	433	2,064,549	2,169,737
1926	446	2,186,804	2,230,547	1927	456	2,185,651	2,312,351
1927	540	2,532,942	2,397,753	1928	538	2,454,886	2,469,226
1928	487	2,295,053	2,313,011	1929	534	2,468,483	2,555,250
1929	523	2,425,261	2,432,783	1930	515	2,493,385	2,502,519
1930	458	2,314,424	2,059,582	.....	³ 488	2,425,733	2,335,939

¹ Canal opened August 15, 1914.

² Average for 10½ months of fiscal year ended June 30, 1915.

³ First 9 months of calendar year 1930.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 2, 1930.

No. 771.

Caribbean Sea, lights reported extinguished. The French S. S. *Pellerin de la Touche* reports the following lights extinguished under date of September 26, 1930:

1. *Morro del Robledar, west point of Margarita Island.* Approximate position: Latitude 11° 03' N., longitude 64° 23' W.
2. *Ranchos Point Light, north side of Tortuga Island.* Approximate position: Latitude 10° 58' 20" N., longitude 65° 18' 10" W.

(See Notice to Mariners No. 768, Balboa Heights, dated September 24, 1930).

The S. S. *Baracoa* reports the following under date of October 1, 1930:

Tesoro Island light, approaches to Cartagena, Colombia. Not burning at 7.35 p. m., approximate position: Latitude 10° 14' 10" N., longitude 75° 44' 50" W.

H. BURGESS,
Governor.

New Vessel for Pacific-Argentine-Brazil Line.

The McCormick Steamship Company announces the purchase from the United States Shipping Board of the steamer *Emergency Aid* for use in the service of the Pacific-Argentine-Brazil Line from the Pacific coast to the east coast of South America. The vessel is of the three-island type, of 8,800 deadweight tons, with steam turbine propulsion. She was used by the Shipping Board in the Gulf-European service prior to her charter to the McCormick Steamship Company during the early part of 1929. The vessel has been in San Francisco since the completion of her charter last January.

The Pacific-Argentine-Brazil Line was established by the United States Shipping Board and was operated prior to the advent of the McCormick control about five years ago by Swayne & Hoyt, Inc. In addition to the *Emergency Aid*, the following vessels are in the service: *West Cactus*, *West Notus*, *West Camargo*, *West Ira*, *West Ivis*, *West Nilus*, *West Mahwah*, and *Hollywood*. The *West Ira*, *West Ivis*, *West Camargo*, and *Hollywood* are fitted with refrigeration chambers for carriage of cold meats and fruit. With sailings approximately every 20 days, the vessels proceed from north Pacific ports of the United States to Argentina and Brazil via the Strait of Magellan, thence through the Panama Canal to San Francisco. Accommodations are provided for a limited number of passengers.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending October 4, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cristobal	Panama R. R. S. S. Line		September 28		930
Heredia	United Fruit Co.		September 28		29
Davistan	Leyland S. S. Line		September 29		174
Ulva	United Fruit Co.	September 28	September 28		162
Stuyvesant	Royal Netherlands S. S. Co.	September 28	October 1	5	3
Alvarado	Pacific Steam Navigation Co.	September 29	September 29	114	12
Modavia	Donaldson Line	September 29	September 29	(¹)	365
Albert Voegler	Hamburg-American Line	September 29	September 29	89	89
Santa Teresa	Grace Line	September 29	September 29	182	(¹)
Calamares	United Fruit Co.	September 29	October 1	1,217	47
Alkmaar	Royal Netherlands S. S. Co.	September 29	October 1	110	122
Pellerin de la Touche	French Line	September 30	October 1	95	298
Cauca	National Navigation Co.	September 30	October 2	68	216
Durazzo	Hamburg-American Line	September 30	October 3	550	173
Magallanes	Spanish Line	September 30	October 4	175	596
Santa Barbara	Grace Line	October 1	October 1	102	98
San Pedro	Pacific-Atlantic Line	October 1	October 1	154	(¹)
Tono	Chilean S. S. Line	October 1	October 1	55	1
Magdalena	Hamburg-American Line	October 1	October 1	132	101
Zacapa	United Fruit Co.	October 1	October 2	597	130
Castilla	United Fruit Co.	October 1	October 2	648	181
Iriona	United Fruit Co.	October 1	October 4	(¹)	37
Aemjula	Pacific Steam Navigation Co.	October 1	October 4	448	982
Lechgoil	Pacific Steam Navigation Co.	October 2	October 2	(¹)	128
Delalain	Leyland S. S. Line	October 2	October 2	362	(¹)
Barneveld	Royal Netherlands S. S. Co.	October 2	October 2	60	54
Barut	Royal Netherlands S. S. Co.	October 2	October 2	285	
Tacuna	Hamburg-American Line	October 2	October 3	23	257
Buenaventura	Panama R. R. S. S. Line	October 2	October 4	850	132
Baracoa	United Fruit Co.	October 2	October 3	8	291
Weinand	North German Lloyd	October 3	October 3		32
Stuyvesant	Royal Netherlands S. S. Co.	October 3	October 4	(¹)	378
Amapala	Standard Fruit & S. S. Co.	October 3	October 4	67	389
Magdalena	Hamburg-American Line	October 4		(¹)	
Camden	United Fruit Co.	October 4		7,021	
Cartago	United Fruit Co.	October 4		83	
Guayaquil	Panama R. R. S. S. Line	October 4	October 4	321	167

¹ No cargo discharged.² No cargo laded.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 6, 1930.

No. 772.

Caribbean Sea, Serrana Bank, Southwest Cay, light extinguished. The S. S. *Huguenot* reports that on October 5, 1930, at 1 a. m., when passing Southwest Cay, Serrana Bank, at a distance of 5 miles, with the atmosphere clear, the light was not visible and apparently extinguished. Approximate position: Latitude 14° 16' 40" N., longitude 80° 23' 50" W.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 6, 1930.

No. 773.

Panama Bay, Perlas Islands, measured mile constructed. The following information is furnished by the Commandant of the Fifteenth Naval District at Balboa, C. Z.:

A measured mile has been constructed by the U. S. S. *Niagara* on the west coast of Pedro Gonzales Island in the Perlas group and is available for any vessels desiring to use it.

The beacons are located as follows:

<i>Southern range.</i>	<i>Latitude.</i>	<i>Longitude.</i>
(a) Seaboard tower	8° 24' 21.28" N.	79° 08' 02.714" W.
(b) Inshore tower	8° 24' 21.28" N.	79° 07' 54.394" W.
Distance between towers, 835 feet.		

<i>Northern range.</i>	<i>Latitude.</i>	<i>Longitude.</i>
(c) Seaboard tower	8° 25' 21.611" N.	79° 07' 48.681" W.
(d) Inshore tower	8° 25' 21.611" N.	79° 07' 44.781" W.
Distance between towers, 392 feet.		
Distance between southern and northern ranges, 6,080.51 feet.		

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 7, 1930.

No. 774.

Ecuador, Gulf of Guayaquil, buoys and beacons established. The Ecuadorean Legation in Panama is the authority for the following information concerning the establishment of buoys and beacons in the Gulf of Guayaquil:

Lighthouse at Puerto de Balsas: Characteristics, flashing white light; period 6.8 seconds; flash 0.6 seconds, eclipse 6.2 seconds. Approximate position: Latitude 2° 35' 00" S., longitude 79° 53' 32" W.

Buoy at Puña Bar: Characteristics, flashing white light; period 3 seconds; flash 1 second, eclipse 2 seconds. Approximate position: Latitude 2° 42' 04" S., longitude 79° 55' 46" W.

This buoy marks the south head of the Isla Verde shoal in the 3 fathom edge of the bank in the lowest Zicilia Tide. (At approximately 3 cable lengths can be found the 10 fathom deep edge of the bank and at 4 cable lengths that of the 15 fathom depth toward the southeast.)

See Notice to Mariners No. 764, Balboa Heights, September 22, 1930.

Buoy on Salinas Point (Puña Island): Characteristics, group flashing white; period 10 seconds; flash 0.5 seconds, eclipse 2.0 seconds, flash 0.5 seconds, eclipse 7.0 seconds. Approximate position: Latitude 3° 04' 15" S., longitude 80° 20' 15" W.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 7, 1930.

No. 775.

Ecuador, Bellaca Point, Bahía de Caraquez, light established. The following report was received by the Hamburg-American Line, Cristobal, C. Z., from their Guayaquil representative:

A new light has been established on Bellaca Point, Bahía de Caraquez, Ecuador. Characteristics: Group flashing white; period 10 seconds, flash 0.5 second, eclipse 2.0 seconds, flash 0.5 second, eclipse 7.0 seconds.

Approximate position: Latitude 0° 36' 00" S., longitude 80° 27' 15" W.

H. BURGESS,
Governor.

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1930 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
<i>Ancon</i> *.....	September 30.	October 5....	October 8....	October 12....	October 15....	October 20.
<i>Cristobal</i>	October 15....	October 20....	October 23....	October 28....	October 31....	November 5.
<i>Ancon</i>	October 28....	November 2..	November 5..	November 9..	November 12..	November 17.
<i>Cristobal</i>	November 11.	November 16.	November 19.	November 23.	November 26.	December 1.
<i>Ancon</i>	November 25.	November 30.	December 3..	December 7..	December 10..	December 15.
<i>Cristobal</i>	December 9..	December 14..	December 17..	December 21..	December 24..	December 29.
<i>Ancon</i>	December 23..	December 28..	December 31..	January 4....	January 7....	January 12.

* Due to discontinuance of the daylight saving time, departure after S. S. *Cristobal*, Sept. 15th, will be at 4 p. m., standard time.

Steamers sail at 4 p. m. from pier 65, North River, Foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

Location of Patients and Visiting Hours, at Gorgas Hospital.

The following table shows the distribution of patients in the Gorgas hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Visiting Hours.
Section "A:"	
Ward 2, Semi-private, white male.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 3, American male, eye, ear, nose and throat patients.....	Tuesdays, Thursdays and Saturdays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 4, Private rooms.....	Daily, same as Ward 2 (above).
Section "B:"	
Ward 5, Male, private rooms, American boys.....	} Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 6, Foreign, male and female, private rooms, American girls.....	
Ward 7, White females, private rooms.....	
Ward 8, Obstetrical department, white females.....	
Nursery.....	No visitors permitted in nursery.
Section "C:"	
Ward 9, Colored, male.....	} Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 10, White foreign, male.....	
Ward 11, Colored, male (surgical).....	
Ward 12, Colored, male (medical).....	
Ward 13, Colored, male, G. U.....	
Ward 14, White, male, G. U.....	Tuesdays, Thursdays, Saturdays, Sundays, and holidays, 2.30 to 4.30 p. m.
Section "D:"	
Ward 15, American, male (surgical).....	} Tuesdays, Thursdays, Saturdays, Sundays and holidays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.
Ward 16, American, male (medical).....	
Ward 17, Colored children.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3.00 p. m.
Ward 18, White children.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 19, Colored, female (medical).....	} Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 20, Colored, female, surgical, obstetrical.....	
Isolation section.....	No visitors permitted except to visit tuberculosis patients Thursdays, Sundays and holidays, 1.30 to 3.00 p. m.

Permission to visit outside of visiting hours may be granted upon application to the Superintendent's Office. Immediate relatives of seriously ill patients will be admitted at any time by and in the discretion of the attending physician, section nurse, and in her absence, the nurse in charge.

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Certificate.—By direction of the Governor of the Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., October 15, 1930. No. 11.

Commercial Traffic Through the Panama Canal in September, 1930, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of September, 1930, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for September, 1929 and 1928. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States	73	399,818	302,533	488,437	302,385	\$343,051.19	291,138
East coast of United States to west coast of South America:							
British	10	32,602	26,013	43,377	26,529	27,278.18	10,611
Chilean	1	4,705	3,466	7,310	3,976	4,332.50	1,545
Swedish	1	4,421	3,743	15,339	4,377	3,183.12	
United States	14	61,523	49,393	87,847	49,344	49,620.13	15,519
Total	26	103,251	82,615	153,873	84,226	84,413.93	27,675
Europe to west coast of United States:							
British	11	55,575	43,799	69,737	43,692	42,346.65	7,134
Danzig	1	6,338	5,236	8,956	5,041	4,563.36	
Dutch	1	7,551	5,776	9,399	5,814	7,220.00	2,301
French	2	10,369	8,588	13,682	8,153	7,465.68	
German	1	10,779	7,620	13,122	7,693	7,975.70	4,795
Italian	1	4,507	3,352	5,604	3,456	3,245.04	
Norwegian	4	27,528	22,144	36,636	21,430	19,820.16	
Swedish	3	18,146	14,834	24,173	16,708	13,606.53	
Total	25	140,793	111,349	181,309	111,987	106,243.12	14,230
Europe to west coast of South America:							
British	6	33,587	26,741	43,723	27,143	33,426.25	21,669
Danzig	1	6,127	5,268	8,939	5,007	4,411.44	
Dutch	2	10,895	7,185	12,446	7,244	8,981.25	5,599
French	1	4,984	4,249	6,713	4,198	5,311.25	4,345
German	4	20,395	14,104	22,994	13,892	17,630.00	16,467
Italian	1	9,373	5,223	11,669	6,779	6,528.75	987
Norwegian	2	10,875	9,300	15,252	9,047	7,830.00	
Swedish	1	3,967	3,072	5,065	4,065	3,840.00	7,062
Total	18	100,803	75,142	126,801	77,375	87,958.94	56,120
Europe to west coast of Canada:							
British	5	29,290	21,232	34,498	21,271	24,289.64	5,274
Danish	2	13,362	9,896	16,746	10,406	12,370.00	4,300
Dutch	1	7,056	4,547	7,310	4,495	5,683.75	1,881
French	3	17,638	11,376	19,360	11,677	14,220.00	3,184
German	3	18,842	12,320	20,725	12,695	14,921.28	9,273
Italian	1	5,992	4,354	7,061	4,460	5,442.50	3,132
Norwegian	2	11,097	6,356	10,692	6,550	7,945.00	3,192
Swedish	1	5,485	3,406	5,558	4,246	4,257.50	4,944
Total	18	108,762	73,487	121,860	75,800	89,129.67	35,180

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of United States to Far East:							
British.....	4	20,699	13,688	22,973	14,139	\$17,110.00	19,705
Danish.....	1	4,483	2,495	4,194	2,532	3,118.75	5,199
Japanese.....	7	36,870	30,449	46,815	29,847	38,061.25	46,161
Norwegian.....	2	9,163	4,998	8,526	4,988	6,247.50	11,444
Panamanian.....	1	6,955	3,998	7,044	3,988	4,997.50	3,944
United States.....	2	11,176	8,365	12,013	7,389	10,456.25	11,815
Total.....	17	89,376	63,993	101,565	62,883	79,991.25	98,259
Cristobal to west coast of South America:							
Colombian.....	4	574	554	890	550	673.70	800
Dutch.....	1	742	294	780	323	367.50	91
German.....	4	3,491	2,260	4,347	2,334	2,825.00	1,039
Total.....	9	4,807	3,108	6,007	3,297	3,866.20	1,939
Europe to Australasia:							
British.....	7	52,491	38,026	63,793	39,578	47,337.00	38,101
East coast of United States to Australasia:							
British.....	4	26,935	17,775	28,527	17,789	22,218.75	8,852
Norwegian.....	1	4,944	2,666	4,562	2,760	3,332.50	7,300
United States.....	1	5,002	4,549	5,867	3,660	5,686.25	2,128
Total.....	6	36,881	24,990	38,956	24,209	31,237.50	18,280
East coast of United States to Philippine Islands:							
British.....	4	25,163	13,805	25,043	13,971	17,256.25	13,818
East coast of United States to west coast of Canada:							
British.....	1	4,318	3,094	4,929	3,073	3,108.96	.....
United States.....	3	12,539	9,673	15,660	9,615	12,091.25	18,550
Total.....	4	18,857	12,767	20,589	12,688	15,200.21	18,550
East coast of United States to Hawaiian Islands:							
United States.....	4	19,439	13,055	21,445	13,053	14,810.58	16,094
Foreign vessels in ballast—United States inter-coastal:							
British.....	1	4,634	4,037	6,498	4,040	3,336.48	.....
Danzig.....	1	8,167	5,485	8,952	5,096	5,880.24	.....
Norwegian.....	1	6,604	5,517	9,153	5,527	4,754.88	.....
Total.....	3	19,405	15,039	24,603	14,663	13,971.60	.....
Cristobal to west coast of Central America:							
British.....	3	3,028	2,568	4,831	2,715	3,210.00	2,527
Around the world:							
United States.....	2	22,075	17,737	29,703	17,712	22,171.25	7,070
East coast of Canada to Australasia:							
British.....	2	8,597	6,612	10,863	6,607	8,265.00	7,729
West Indies to Far East:							
British.....	1	4,102	3,167	5,106	3,165	3,958.75	6,654
Norwegian.....	1	3,518	2,349	3,916	2,323	2,936.25	6,405
Total.....	2	7,620	5,516	9,022	5,493	6,895.00	13,059
Cristobal to west coast of United States:							
United States.....	2	4,637	3,781	6,415	3,802	4,040.63	213
East coast of Canada to west coast South America:							
British.....	2	12,995	11,192	20,830	10,554	9,356.40	.....
East coast of Canada to west coast of United States:							
United States.....	1	3,719	3,673	5,187	3,686	2,754.75	.....
East coast of Central America to Australasia:							
British.....	1	4,521	3,179	4,934	3,072	3,973.75	5,251
East coast of South America to west coast of Canada:							
United States.....	1	4,989	3,517	5,550	3,517	4,396.25	4,800

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of South America to Far East:							
Japanese.....	1	7,626	5,441	9,627	5,848	\$6,801.25	3,709
Canadian intercoastal:							
British.....	1	4,075	3,258	5,482	3,375	4,072.50	2,674
West Indies to west coast of United States:							
United States.....	1	6,050	5,140	8,207	5,092	4,356.00	.....
West Indies to west coast of South America:							
British.....	1	4,033	3,177	5,135	3,169	2,903.76	.....
Europe to west coast of Central America:							
German.....	1	3,297	2,191	3,622	2,239	2,738.75	1,720
Africa to west coast of South America:							
Yugoslav.....	1	5,674	3,859	6,403	3,852	4,085.28	.....
East coast of United States to west coast of Central America:							
German.....	1	2,356	1,468	2,446	1,434	1,696.32	.....
Africa to Australasia:							
British.....	1	4,612	2,835	4,545	2,842	3,543.75	7,462
Grand total, Sept., 1930.....	238	1,227,748	915,053	1,517,083	921,034	1,029,728.08	595,559
Grand total, Sept., 1929.....	278	1,277,640	981,844	1,621,511	988,574	1,105,577.70	746,289
Grand total, Sept., 1928.....	253	1,215,633	933,111	1,538,276	936,935	1,061,240.88	709,654

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	73	414,904	313,266	506,953	313,269	\$391,357.86	565,165
West coast of Canada to Europe:							
British.....	12	63,242	41,587	70,208	41,622	51,983.75	91,342
Danish.....	2	10,998	9,456	13,571	9,469	11,820.00	18,103
French.....	1	7,475	4,446	7,817	4,667	5,557.50	8,998
German.....	3	19,753	12,690	21,753	13,098	15,862.50	26,217
Italian.....	1	5,997	4,372	7,057	4,455	5,465.00	8,757
Japanese.....	2	10,116	9,232	12,451	9,418	11,388.05	16,816
Norwegian.....	4	19,676	12,397	20,559	12,532	15,496.25	28,800
United States.....	2	11,470	8,286	13,270	8,276	10,357.50	17,244
Total.....	27	148,727	102,466	166,686	103,537	127,930.55	216,277
West coast of South America to Europe:							
British.....	7	33,560	25,060	42,592	26,348	32,075.00	41,733
Danzig.....	1	6,310	5,346	8,940	5,050	6,682.50	11,300
Dutch.....	2	8,926	5,582	8,998	5,278	6,977.50	13,217
French.....	1	5,020	4,196	6,798	4,263	5,245.00	8,730
German.....	6	30,363	22,378	35,881	22,291	27,972.50	44,147
Italian.....	1	7,516	5,514	12,003	6,058	6,892.50	1,701
Norwegian.....	2	7,561	4,621	7,594	4,636	5,776.25	12,350
Yugoslav.....	1	3,759	3,899	6,361	3,850	4,873.75	9,900
Total.....	21	103,015	77,196	129,167	77,689	96,495.00	143,078
West coast of United States to Europe:							
Belgian.....	1	4,976	4,568	7,138	3,983	5,710.00	9,560
British.....	6	28,307	22,758	36,882	22,480	28,446.25	50,423
French.....	1	6,907	6,693	9,117	6,732	8,288.40	11,505
German.....	1	4,340	3,762	6,370	3,658	4,702.50	8,160
Japanese.....	2	8,789	8,714	11,721	8,518	10,546.80	15,570
Norwegian.....	6	30,225	25,355	42,137	25,128	31,693.75	55,318
United States.....	3	21,773	16,931	27,240	16,761	21,163.75	36,734
Total.....	20	105,317	88,781	140,605	87,265	110,551.45	187,270
West coast of South America to east coast of United States:							
British.....	5	17,809	14,450	24,495	14,977	\$18,062.50	19,316
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	2,225
Norwegian.....	3	3,774	3,268	5,153	3,003	4,085.00	7,900
Swedish.....	1	4,496	3,743	15,337	4,385	4,678.75	21,800
United States.....	10	39,845	29,399	52,025	29,326	36,688.90	44,704
Total.....	20	70,629	45,326	104,320	55,667	67,847.65	95,945

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of South America to Cristobal:							
Colombian.....	4	574	554	880	550	\$673.70	373
Dutch.....	1	742	294	780	323	367.50	475
German.....	5	4,532	2,777	5,480	2,890	3,471.25	3,229
Total.....	10	5,848	3,625	7,140	3,763	4,512.45	4,077
Australasia to Europe:							
British.....	8	61,286	46,456	74,928	46,958	58,070.00	47,747
French.....	1	5,633	4,305	7,138	4,380	5,381.25	2,645
Total.....	9	66,919	50,761	82,066	51,338	63,451.25	50,392
Philippine Islands to east coast of United States:							
Danish.....	2	5,949	4,745	7,857	4,785	5,931.25	7,705
Japanese.....	1	5,676	4,655	7,543	4,516	5,818.75	9,353
Panamanian.....	1	6,967	3,963	6,604	4,057	4,953.75	5,407
United States.....	4	24,042	20,206	30,458	20,232	25,257.50	27,930
Total.....	8	42,634	33,569	52,462	33,590	41,961.25	50,395
West coast of Canada to east coast of United States:							
Norwegian.....	1	3,235	2,313	3,924	2,336	2,891.25	4,517
United States.....	5	23,403	17,247	27,963	17,221	21,558.75	27,157
Total.....	6	26,638	19,560	31,887	19,557	24,450.00	31,674
West coast of United States to West Indies:							
Italian.....	1	4,320	3,701	6,468	3,640	4,626.25	7,292
Norwegian.....	2	10,044	8,409	14,189	8,389	10,511.25	18,441
United States.....	1	7,363	7,178	9,621	7,171	8,835.60	13,291
Total.....	4	21,727	19,288	30,278	19,200	23,973.10	39,024
Australasia to east coast of Canada:							
British.....	3	14,047	10,986	17,951	10,985	13,732.50	4,736
West coast of Central America to Cristobal:							
British.....	2	2,322	1,930	3,661	2,061	2,412.50	326
Colombian.....	1	163	164	233	166	123.00	.....
Total.....	3	2,485	2,094	3,894	2,227	2,535.50	326
Far East to east coast of United States:							
Japanese.....	2	11,043	8,676	14,017	8,497	10,845.00	5,602
Australasia to east coast of United States:							
Norwegian.....	1	4,265	2,495	4,333	2,494	3,118.75	6,982
United States.....	1	5,247	3,825	6,197	3,822	4,781.25	6,218
Total.....	2	9,512	6,320	10,530	6,316	7,900.00	13,200
Balboa to Cristobal:							
Panamanian.....	2	106	106	106	106	127.20	65
West coast of South America to east coast of Canada:							
British.....	1	7,717	6,514	11,941	6,270	8,142.50	16,400
United States.....	1	6,087	5,100	8,212	5,108	6,375.00	11,600
Total.....	2	13,804	11,614	20,153	11,378	14,517.50	28,000
West coast of Canada to east coast of South America:							
Norwegian.....	1	5,132	2,912	4,885	3,005	3,640.00	1,769
United States.....	1	5,011	3,623	5,702	3,580	4,528.75	8,220
Total.....	2	10,143	6,535	10,587	6,585	8,168.75	9,989
West coast of United States to Cristobal:							
United States.....	2	4,637	3,781	6,415	3,802	4,726.25	1,030

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Hawaiian Islands to east coast United States:							
United States	1	1,740	1,542	2,647	1,542	\$1,927.50	3,280
West coast of South America to Egypt:							
Norwegian	1	4,723	2,728	4,624	2,765	3,410.00	8,270
West coast of South America to east coast Central America:							
British	1	3,892	3,363	5,582	3,370	2,802.24	.....
Canadian Intercoastal:							
British	1	4,186	3,322	5,439	3,336	4,152.50	6,198
Grand total, Sept., 1930 ..	220	1,086,676	823,905	1,353,509	825,784	1,027,375.50	1,463,993
Grand total, Sept., 1929 ..	245	1,147,621	870,696	1,436,521	873,097	1,096,211.70	1,686,494
Grand total, Sept., 1928 ..	234	1,079,420	837,984	1,371,178	840,189	1,049,989.68	1,603,357

“Damsterdijk” Transits Canal.

The new combination passenger and freight motor ship *Damsterdijk*, of the Holland-America Line, operated by the North Pacific Coast Line (joint service of the Holland-America and the Royal Mail Steam Packet Company), transited the Canal from the Atlantic to the Pacific on October 6, 1930, on her initial voyage in the company's service between Europe and the Pacific coast of North America. The new vessel is 490 feet long by 64.6 feet beam, and of 10,220 gross tons, approximately the same dimensions and tonnage as the *Delfdijk*, which was placed in the service the latter part of 1929. At Cristobal the *Damsterdijk* loaded 188 tons of bananas and 40 tons of other cargo for Pacific coast ports.

Other vessels running in this service are the *Lochmonar*, *Lochgoil*, *Lochkatrine*, *Narenta*, *Nebraska*, *Nichteroy*, *Drechtdijk*, *Dinteldijk*, *Eemdijk*, *Kinderdijk*, and *Moerdijk*.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending October 11, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Condor	Grace Line	September 20.	October 3.....	4,142	.....
Santa Barbara	Grace Line	October 1.....	October 1.....	.....	4
Alkmaar	Royal Netherlands S. S. Co.	October 1.....	October 1.....	152	.....
Acajutla	Pacific Steam Navigation Co.	October 1.....	October 1.....	1	.....
Lompoe	C. T. Bowring & Co.	October 2.....	October 4.....	9,430	.....
Theodore Roosevelt ..	Fred Olsen & Co.	October 2.....	October 2.....	.....	1
Cauca	National Navigation Co.	October 3.....	October 4.....	.....	47
Pennsylvania	Panama-Pacific Line	October 3.....	October 3.....	.....	154
La Perla	United Fruit Co.	October 3.....	October 4.....	590	65
Rangitiki	New Zealand Shipping Co.	October 5.....	October 6.....	15	.....
Neches	U. S. Government	October 6.....	October 7.....	3,142	.....
Santa Inez	Grace Line	October 7.....	October 7.....	1	54
Venezuela	Panama Mail S. S. Co.	October 7.....	October 8.....	59	3
El Salvador	Panama Mail S. S. Co.	October 7.....	October 8.....	110	.....
Champerico	Pacific Steam Navigation Co.	October 8.....	October 8.....	3	.....
San Jose	United Fruit Co.	October 9.....	October 10.....	183	.....
Swiftlight	C. D. Mallory & Co.	October 10.....	October 12.....	11,000	.....
Tokiwa Maru	Nippon Yusen Kaisha	October 10.....	October 11.....	231	.....
Apurimac	Peruvian Line	October 10.....	October 11.....	150	.....
Marie Bakke	Scandinavian South Pacific Line ..	October 11.....	October 11.....	38	.....
Torborg	Anglo-Saxon Petroleum Co	October 11.....	October 13.....	6,956	.....

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, October 11, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day	Hour	Day	Hour	Day	Hour	Day	Hour								Nature.	Tons.		Gross.	Net.
Baratl	2	16.30	5	6.05	5	12.40	5	14.15	Dutch.	Royal Neth. S. S. Co.	200.0	33.0	11.9	Cristobal, C. Z.	Guayaquil, Ecuador	General	53	1,183
Pacific Cedar	3	4.20	5	6.15	5	13.10	5	14.15	American.	Dixon S. S. Corp	399.0	56.7	21.0	Philadelphia, Pa.	Tacoma, Wash.	General	4,300	6,138
Ditworth	3	8.05	5	8.45	5	14.50	5	16.04	American.	Tidwell Oil Co.	335.0	54.1	20.1	Los Angeles, Calif.	Los Angeles, Calif.	Ballast	7,441	5,077
Prinero	3	6.30	5	8.45	5	17.08	5	18.00	Norwegian.	Moore & McCormick.	461.0	53.6	13.0	New York, N. Y.	W. Westminster, B. C.	Ballast	5,704	4,273
Tai Yin	3	2.40	5	10.25	5	17.05	5	18.05	Norwegian.	Barber S. S. Lines.	368.0	60.0	20.0	New York, N. Y.	Hilo, P. I.	General	2,881	9,997
Amistion City	3	10.45	5	11.45	5	18.25	5	19.48	Norwegian.	Ischman S. S. Lines.	424.2	56.2	24.9	Baltimore, Md.	Vancouver, N. C.	General, steel	7,492	7,611
Kung City	3	4.00	5	11.45	5	19.19	5	21.00	British.	Readson-Smith Line.	400.0	64.5	14.6	Newcastle, Eng.	Vancouver, N. C.	Ballast	9,626	5,397
Lansanger	3	00.20	5	13.05	5	19.10	5	20.00	Norwegian.	Anglo-Swedish Pet. Co.	477.7	63.0	16.6	Glasgow, Scotland	Los Angeles, Calif.	Ballast	3,841	10,247
Vancouver	3	00.05	5	14.15	5	21.00	5	22.15	American.	Humboldt Packet Line.	477.7	63.0	21.0	Hamburg, Germany	Vancouver, B. C.	General, bananas	5,000	6,623
Acworld	3	22.30	5	13.00	5	21.00	5	22.15	German.	Humboldt Packet Line.	400.0	54.2	22.0	Baltimore, Md.	Tacoma, Wash.	General	7,720	5,615
Munmystry	3	11.55	5	13.00	5	22.00	5	23.00	American.	McCoy & Line.	429.0	50.2	15.0	Baltimore, Md.	Los Angeles, Calif.	Ballast	4,460	3,090
S-14	3	00.30	6	7.20	6	13.54	6	15.20	Spanish.	Riehoff Oil Co.	350.0	50.0	13.0	Gibraltar	Arica, Chile	Ballast	.....	.....
S-19	3	19.30	6	9.25	6	16.45	6	17.50	American.	U. S. Navy.	231.0	21.0	.....	Cristobal, C. Z.	Balboa, C. Z.	Ballast	.....	.....
S-15	3	19.30	6	9.25	6	15.59	6	17.00	American.	U. S. Navy.	231.0	21.0	.....	Cristobal, C. Z.	Balboa, C. Z.	Ballast	.....	.....
S-17	3	19.30	6	9.25	6	15.52	6	17.00	American.	U. S. Navy.	231.0	21.0	.....	Cristobal, C. Z.	Balboa, C. Z.	Ballast	.....	.....
Kirkliston	6	7.30	6	11.00	6	18.00	6	19.15	British.	Antilles S. S. Co.	280.0	42.0	13.0	Pt. Royal, Jamaica	Puntarenas, C. R.	Ballast	2,167	1,341
Maunoa	6	11.55	6	12.05	6	18.55	6	21.00	British.	Shaw, Savill & Albion.	477.7	62.9	19.6	London, England	Vancouver, B. C.	Ballast	11,053	7,895
Damsterdijk	5	16.10	6	12.45	6	19.58	6	21.00	Dutch.	Holland-American Line	400.0	64.6	22.5	Rotterdam, Holland	Vancouver, B. C.	General	3,549	11,721
William A.	6	15.33	6	15.35	6	22.45	6	23.55	American.	Krauss & Co.	395.0	55.0	16.6	Boston, Mass.	Grays Har., Wash.	Ballast	.....	6,993
McKenney	6	.....	6	.....	6	16.52	6	.....	American.	U. S. Navy.	.....	.....	.....	Cristobal, C. Z.	Balboa, C. Z.	Ballast	.....	5,099
Leacock	6	.....	6	.....	6	16.52	6	.....	American.	U. S. Navy.	.....	.....	.....	Cristobal, C. Z.	Balboa, C. Z.	Ballast	.....	.....
Hennan F.	6	19.30	6	19.55	7	11.07	7	12.45	American.	Union Sulphur Co.	409.8	54.2	21.0	New York, N. Y.	Vancouver, B. C.	Sulphur	4,750	6,581
Wilton	6	23.30	7	8.15	7	12.56	7	14.00	Norwegian.	Ferry Line.	376.5	53.1	21.0	New Orleans, La.	Shanghai, China.	Cotton	4,275	6,264
Sjested	7	8.30	7	8.30	7	15.12	7	22.45	American.	Riehoff Oil Co.	500.0	71.2	20.0	New York, N. Y.	Los Angeles, Calif.	Ballast	11,697	8,542
Samahua	7	8.35	7	8.25	7	15.52	8	00.30	American.	Grace Line.	370.0	53.2	21.0	New York, N. Y.	Tacahuanu, Chile	General	1,709	6,255
Santa Inez	7	12.35	7	10.00	7	16.26	8	15.35	American.	Panama Mail S. S. Co.	380.0	48.7	23.3	New York, N. Y.	San Francisco, Cal.	General	2,710	6,033
Venezuela	7	18.55	7	10.00	7	17.45	8	15.35	American.	Amer-Hawaiian Line.	491.5	58.2	19.10	Boston, Mass.	Seattle, Wash.	General	2,400	10,491
Virginia	7	10.25	7	10.35	7	17.45	7	19.05	American.	Amer-Hawaiian Line.	491.5	58.2	19.10	Boston, Mass.	Seattle, Wash.	General	2,400	10,491
City of	7	10.30	7	12.05	7	18.55	7	20.05	British.	Amer-Manchurian Line.	456.0	58.5	26.0	Philadelphia, Pa.	Shanghai, China.	General	4,908	9,037
Houbaux	7	11.00	7	13.25	7	19.55	8	1.27	Norwegian.	Argo-Marine Pet. Co.	450.0	61.0	19.6	Hamburg, Germany	Los Angeles, Calif.	Ballast	.....	8,108
Sydney	7	11.05	7	13.30	7	21.37	8	2.35	British.	Maritime Shipping Co.	406.0	56.0	19.0	Barry, England	Vancouver, B. C.	Ballast	.....	5,452
Phillipson	7	16.33	8	17.25	8	11.54	8	19.32	American.	Roosevelt S. S. Co.	439.6	60.2	25.0	New Orleans, La.	Shanghai, China.	General, steel	6,445	9,019
William Penn	7	20.30	8	17.25	8	11.54	8	19.32	American.	Tampa Lateral Co.	439.6	60.2	25.0	New Orleans, La.	Shanghai, China.	General, steel	6,445	9,019
Edwan Allen	7	20.30	8	17.25	8	11.54	8	19.32	American.	Edwan Allen	439.6	60.2	25.0	New Orleans, La.	Shanghai, China.	General, steel	6,445	9,019
Wetli City	7	23.30	8	6.25	8	15.27	8	16.30	British.	Continental Grain Co.	411.0	54.6	15.0	Barry, England.	Manila, P. I.	Gen., cotton, oil	7,557	6,957
Walter A.	7	22.00	8	7.15	8	16.00	8	17.00	American.	Luckenbach Line.	446.5	56.1	23.0	Boston, Mass.	Vancouver, B. C.	Ballast	4,027	8,785
Luckenbach.	7	22.00	8	7.15	8	16.00	8	17.00	American.	Luckenbach Line.	446.5	56.1	23.0	Boston, Mass.	Seattle, Wash.	General	4,027	8,785

* Motor ship.
‡ Submarine.

† Tanker.

Amerikaland 2	8	1 05	8	7 40	8	21 25	Swedish	Ore S. S. Corp.	561 0	72 0	21 0	Baltimore, Md	Cruz Grande, Chile	15 560	4 406	Ballast	
China Arrow 1	8	7 20	8	8 35	8	19 10	American	Standard Transp. Co.	468 3	62 7	18 0	Boston, Mass	Los Angeles, Calif	10 084	7 388	Ballast	
Amberton	8	11 30	8	11 30	8	19 32	British	R. Chapman & Son	400 6	54 0	17 6	Newcastle, Eng.	Vancouver, B. C.	5 786	4 139	Ballast	
Oregon	8	00 45	8	12 05	8	20 08	French	French Line	470 0	61 3	19 6	Dunkirk, France	Vancouver, B. C.	1 711	10 332	General	
Navigator	8	14 35	8	14 35	9	1 25	American	Isthmian S. S. Lines	494 2	56 2	26 0	Philadelphia, Pa.	Singapore, Str. Set.	8 238	7 611	General, steel	
Rangiane 2	8	2 00	9	6 10	9	23 46	British	U. Z. Shipping Co.	531 0	70 0	25 0	London, England	Auckland, N. Z.	4 700	18 205	General	
Neches 1	7	14 30	9	6 23	9	13 20	American	N. S. Navy	495 0	58 0	19 10	Cristobal, C. Z.	Balboa, C. Z.	4 694	7 982	Ballast	
Jacob	9	6 25	9	7 00	9	15 40	American	Luckenbach Line	434 0	57 7	21 6	Houston, Texas	Tacoma, Wash	4 694	7 982	General	
Minerva	9	4 35	9	8 45	9	20 45	Norwegian	H. M. Wrangel	502 0	56 0	22 3	Antwerp, Belgium	Vancouver, B. C.	7 275	6 865	General	
Nevada	8	11 30	9	9 50	9	18 15	French	French Line	420 2	46 0	17 2	Havre, France	Vancouver, B. C.	3 387	7 500	General	
Nosa King	8	15 30	9	11 25	9	19 50	American	N. O. & S. A. S. Co.	324 0	52 0	18 3	New Orleans, La	Corral, Chile	1 263	3 973	General	
Nelmay	8	15 30	9	11 30	9	20 20	British	Melway Shipping Co.	421 0	59 0	14 6	Greenock, Eng	Vancouver, B. C.	8 357	5 950	Ballast	
Ylliger 2	9	5 50	9	12 35	9	23 30	Norwegian	Westfal, Larsen & Co.	398 0	54 0	22 7	Rosario, Arg	Vancouver, B. C.	6 654	6 869	General	
Pacific Ranger	6	11 45	9	13 45	9	22 00	British	Turmes, Withy & Co.	435 0	60 0	19 0	Glasgow, Scotland	Vancouver, B. C.	1 055	9 725	General	
Paul Shoup 1	9	16 30	9	16 40	10	13 00	American	Tidewater Oil Co.	424 4	58 2	13 0	New York, N. Y.	Los Angeles, Calif	7 333	3 182	Ballast	
Lycia 2	9	16 25	9	17 15	10	10 48	British	Canadian Transp. Co.	300 4	44 0	22 0	Demerara, Br. Ga.	Vancouver, B. C.	4 154	3 333	General	
City of Tokio	9	19 05	10	7 25	10	16 05	British	Ellerman Lines, Ltd.	442 5	59 0	23 0	New York, N. Y.	Auckland, N. Z.	2 044	9 076	General	
Broad Arrow 1	10	2 45	10	9 00	10	16 55	American	Standard Oil Co.	457 6	62 0	25 6	Providence, R. I.	Los Angeles, Calif	6 687	9 576	General	
Silverleaf	10	9 40	10	10 05	10	17 00	British	S. & J. Thompson	456 3	62 0	19 8	New York, N. Y.	Penang, Str. Set.	6 244	9 576	General	
Tatsuno Maru	10	2 45	10	10 55	10	18 10	Japanese	Nippon Yusen Kaisha	415 0	56 0	19 8	Baltimore, Md	Kobe, Japan	3 897	8 015	General	
San Lucas	9	23 05	10	11 30	10	20 31	American	Calmar S. S. Corp.	409 8	54 2	23 4	Baltimore, Md	Seattle, Wash	6 438	6 737	General, steel	
Yorkmar	10	7 50	10	12 05	10	21 50	American	States S. S. Co.	409 8	54 2	23 4	Baltimore, Md	Seattle, Wash	6 438	6 737	General, steel	
Caldas 2	9	21 35	10	13 45	10	22 25	German	North German Lloyd	393 0	54 0	23 9	Hamburg, Germany	Buenaventura, Col.	147	211	General	
Ladwigshafen	10	17 40	11	6 05	11	13 16	11 4 45	Greek	S. Lavanos	360 0	52 0	13 0	Newcastle, Eng.	Tatehuanuo, Chile	4 804	6 600	General
Georgios	10	19 35	11	6 10	11	14 13	11 15 30	British	Shaw, Savill & Albion	300 0	63 2	26 11	Newcastle, Eng.	Arica, Chile	4 776	3 429	Ballast
Ferdinade	10	1 35	11	7 10	11	18 15	11 22 32	Danish	Conya & Sons	380 0	53 0	18 0	Nakskov, Denmark	Los Angeles, Calif	4 106	11 811	General
Helen Whittier	11	6 55	11	7 30	11	16 45	11 18 15	American	Christenson S. S. Co.	409 6	54 0	22 0	Baltimore, Md	Seattle, Wash	5 000	6 667	General
Ayuri Maru	11	7 10	11	8 20	11	17 11	11 20 25	Japanese	Kokusai Kisen Kaisha	425 0	54 0	25 0	Boston, Mass.	Yawata, Japan	6 133	6 909	Wheat, cotton
Aldring	10	23 20	11	10 00	11	17 33	11 19 53	British	Court Line, Ltd.	405 0	55 0	13 6	Newcastle, Eng.	Los Angeles, Calif	2 000	1 165	Ballast
Court 2	10	27 05	11	10 25	11	19 00	11 20 33	German	Roland Line	216 5	32 9	12 10	Cristobal, C. Z.	Guayaquil, Ecuador	3 316	6 777	General
American	11	9 30	11	10 35	11	18 30	11 19 50	American	Amer-Hawaiian Line	404 6	54 0	19 0	Boston, Mass.	Portland, Oreg	3 675	2 359	General
San Jose	10	15 10	11	13 10	11	19 40	11 20 35	American	United Fruit Co.	330 0	44 6	16 8	Cristobal, C. Z.	San Francisco, Cal.	3 675	2 359	Ballast
Napier Star	11	10 30	11	13 20	11	20 21	11 22 30	British	Blue Star Line	476 0	67 0	21 0	Newcastle, Eng.	Seattle, Wash	3 011	5 954	Ballast
Canadian	11	10 35	11	14 00	11	23 05	British	Can. Nat. Steamships	400 0	52 0	21 2	Montreal, Canada	Auckland, N. Z.	3 255	5 732	General	
Conqueror	11	19 00	11	19 20	12	15 00	American	Redwood Line	381 0	52 2	18 0	Houston, Texas	Tacoma, Wash.	3 011	5 954	General	
Abron	11	19 00	11	19 20	12	15 00	American	Redwood Line	381 0	52 2	18 0	Houston, Texas	Tacoma, Wash.	3 255	5 732	General	

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Virgilio 2	30	18 30	5	6 31	5	21 28	Italian	Nav. Gen. Italiana	482 8	61 8	23 0	Tatehuanuo, Chile	Genoa, Italy	2 338	12 941	9 329	General
Shobawan	5	6 20	5	6 59	5	15 10	Norwegian	Redwood Line, Inc.	386 2	52 2	22 0	Seattle, Wash.	New Orleans, La	3 623	5 708	4 138	General
Chr. Th. Boe 1	5	6 30	5	7 14	5	16 20	Norwegian	Caucasian Oil Co., Ltd	408 3	55 3	26 0	Los Angeles, Calif	Amnonuth, Eng.	8 469	6 425	4 276	Gasoline
Creole Petroleum	5	11 55	5	19 00	5	19 00	Venezuelan	Creole Petroleum Co.	325 0	55 0	12 0	Balboa, C. Z.	Maracaibo, Venez	3 497	2 076	Ballast	
Bronxville 2	5	15 30	5	16 58	6	10 50	Norwegian	A. F. Klaveness & Co.	386 3	54 2	25 0	Vancouver, B. C.	New York, N. Y.	7 019	6 715	5 058	Lumber

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Tons.	Net.	
Genoa Maru	5	17 40	5	18 21	6	11 25	6	14 40	Japanese	Nippon Yusen Kaisha.	425.0	53.6	24.0	Yokohama, Japan	London, England	General	9,104	6,865
Ranzitiki	5	11 50	6	6 20	6	13 20	6	13 20	British	N. S. Shipping Co.	531.0	70.0	29.0	Auckland, N. Z.	London, England	Frozen, dairy	6,194	18,197
Chifuku Maru	6	8 25	6	10 15	6	17 30	6	19 10	Japanese	Kokusai Kisen Kaisha.	385.0	57.0	27.0	Portland, Ore.	Dublin, Ireland	Wheat	7,918	5,919
Queen Eleanor	6	13 00	6	13 52	6	21 05	6	22 10	British	LaPoint de Nemours	400.3	52.3	25.0	Tacopilla, Chile	New Orleans, La	Nitrate of soda	7,600	5,808
Anglo Indian	6	14 00	6	14 40	6	22 25	7	2 55	British	Lawbna, Latta & Co.	426.0	59.5	24.0	Vancouver, B. C.	Faya 7	Wheat	8,902	7,130
Dragon 5	6	8 15	7	6 15	7	13 10	7	13 10	British	British Admiralty	445.0	46.0	16.4	Mollendo, Peru	Jamaica, B. W. I.	.....	.....	.....
Neches 5	6	6 00	7	6 39	7	14 30	9	6 25	American	U. S. Navy	473.0	65.0	29.0	Los Angeles, Calif	Cristobal, C. Z.	.....	.....	.....
Monique 1	6	14 25	7	7 22	7	16 05	7	21 00	French	Cie. Aux. de Navigation	426.0	57.0	27.0	Los Angeles, Calif	Blaye, France	Gasoline	8,372	7,106
Steel Mariner	6	15 15	7	8 13	7	17 05	7	19 05	American	Isbman S. S. Lines	425.0	56.2	27.0	Vancouver, B. C.	Aronmouth, Eng	General	7,545	7,611
Kansas	7	7 40	7	8 32	7	18 05	7	18 05	American	Amer.-Hawaiian Line	404.6	53.9	26.0	Portland, Ore.	Boston, Mass	General	7,148	6,779
Brandanger 4	7	8 25	7	9 15	7	18 25	7	18 25	Norwegian	Interoceanic Line	381.1	53.8	26.0	Vancouver, B. C.	Rotterdam, Holl'd	General	7,870	6,289
Pacific	7	11 00	7	12 03	7	19 10	7	19 10	British	Furness, Withy & Co.	435.9	60.2	27.2	Vancouver, B. C.	London, England	General	8,182	9,630
Pioneer 4	8	00 45	8	5 55	8	15 55	8	15 55	American	Ore S. S. Corp.	550.3	72.2	35.0	Cruz Grande, Chile	Baltimore, Md	Iron ore	20,669	15,476
El Salvador	7	9 00	8	6 49	8	13 20	8	13 20	American	Panama Mail S. S. Co.	360.2	51.6	24.0	San Francisco, Cal	New York, N. Y.	General	1,973	5,710
Dixie Arrow 1	7	16 50	8	7 18	8	16 05	8	16 05	American	Standard Transp. Co.	468.3	62.7	27.0	Los Angeles, Calif	New York, N. Y.	General	11,249	9,744
Penelope 4	7	16 50	8	7 47	8	15 05	8	18 05	Danzig	W. Tansschiff Rhederei	470.1	63.2	27.0	Talara, Peru	Hamburg, Germany	Gasoline	11,330	9,302
Eastern Sun 1 4	8	1 25	8	8 44	8	17 05	8	17 05	American	Stn Oil Co.	480.6	66.0	29.0	Los Angeles, Calif	Philadelphia, Pa.	Gasoline	13,452	9,907
Santa Cecilia	7	22 15	8	8 53	8	18 20	8	18 20	American	Argonaut S. S. Co.	404.6	53.9	28.0	Seattle, Wash.	Baltimore, Md	Lumber, general	7,260	6,745
Andrea F.	8	1 20	8	9 40	8	19 20	8	19 20	American	Luckenbach Line	496.0	68.2	31.0	Portland, Ore.	Boston, Mass	Lumber, general	12,076	11,487
Carler	8	2 25	8	10 26	8	20 05	8	21 45	Belgium	Compagnie Mar. Belge	471.0	60.8	26.0	Honohulu, T. H.	Rotterdam, Holl'd	General	10,450	9,507
Aden Maru	8	5 00	8	10 40	8	20 45	8	23 00	Japanese	Kokusai Kisen Kaisha.	385.0	51.0	27.1	Vancouver, B. C.	Faya 7	Wheat	7,920	6,203
Kinderijk	8	11 10	8	11 48	8	21 29	9	1 20	Dutch	Holland-America Line	469.4	58.4	.....	Los Angeles, Calif	Antwerp, Belgium	General	8,300	8,515
Pat Doheny 1	8	13 45	8	14 26	8	21 25	8	21 45	American	Richtfield Oil Co. of Cal.	430.0	59.2	27.0	Los Angeles, Calif	Baltimore, Md	Gasoline	9,082	.....
Champierco.	8	15 00	8	15 39	8	22 30	8	22 30	Belgian	Pacific Steam Nav. Co.	290.1	41.7	15.0	Champerico, Guat	Cristobal, C. Z.	.....	254	2,597
Mauzales	9	7 25	8	8 58	8	15 05	8	15 05	German	Roland Line	216.5	32.9	14.3	Guayaquil, Ecuador	Cristobal, C. Z.	General	911	1,132
Tatsuhna	9	8 30	9	9 20	9	16 10	9	16 10	Japanese	Tatsuhna Maru S. S. Co.	423.5	55.6	26.0	Rangoon, India	Nuevitas, Cuba	White rice	7,767	6,763
Spencer	9	14 10	9	14 41	9	21 45	9	21 45	American	Kellogg S. S. Corp.	391.8	51.3	26.0	Manila, P. I.	New Orleans, La.	Coconut oil	6,400	.....
Nitro 6	9	18 30	10	6 16	10	13 40	11	13 30	American	U. S. Navy	463.1	60.1	22.3	Corinto, Nicaragua	Hampton Rds., Va.	Navy general	507	.....
San Jose	9	15 40	10	6 39	10	15 10	11	13 10	American	United Fruit Co.	330.0	44.4	18.2	San Francisco, Cal	Cristobal, C. Z.	.....	388	3,675
Cedar Branch	10	2 40	10	7 10	10	16 15	10	17 15	British	F. & W. Ryson	380.0	51.0	22.0	Corral, Chile	Liverpool, England	General	5,247	4,927
Vega 5	8	15 00	8	14 10	8	17 15	8	16 00	American	U. S. Navy	407.7	54.2	18.0	Marq Island, Calif	Hampton Rds., Va.	Mis. naval stores	2,658	.....
Firmo	10	4 30	10	9 02	10	17 55	10	17 55	American	Ore S. S. Corp.	449.1	57.2	22.0	Cruz Grande, Chile	Baltimore, Md	Iron ore	11,500	7,900
Point Forman	10	11 40	10	13 18	10	20 05	10	20 05	American	Swayne & Hoyt	324.0	46.2	22.0	Portland, Ore.	New Orleans, La.	General	3,716	3,984
Van	10	12 15	10	13 55	10	22 50	11	1 20	Belgium	Nitrate Association	460.4	58.2	27.0	Iquique, Chile	New Orleans, La.	Nitrates	9,700	9,068
Oregonian	10	16 00	10	17 24	11	11 10	11	11 10	American	Amer.-Hawaiian Line	404.0	52.9	28.0	Seattle, Wash.	Alexandria, Egypt	General	6,500	6,754

* Fruits, vegetables, and coffee.

† Coffee, wood, and hides.

‡ 3,300 tons Diesel oil, and 127,000 gallons gasoline.

§ For orders.

¶ Supply ship.

⊗ Cruiser.

⊠ Motorship.

⊡ Tanker.

Apurimac.....	10	8 40	18-00	11	12-55	11	18-10	Peruvian.....	382.0	48.2	21.0	Callao, Peru.....	Jacksonville, Fla., Guano, general.....	4,057	4,867	3,544
C. O.																
Stillman 2 4,	11	3-30	11	7-15	12-30	12	14-35	International Pet. Co.	565.7	75.6	31.0	Talara, Peru.....	New York, N. Y., Crude oil.....	20,000	16,780	9,885
Tokyo Maru	10	20-00	11	10-35	11-15	11	19-20	Nippon Yusen Kaisha,	445.0	58.0	19.0	Mamla, P. I., General.....	Boston, Mass., General.....	2,704	7,657	5,346
Oroya	11	9-40	11	10-46	11-05	12	6-35	Pacific Steam Nav. Co.	325.3	62.8	27.0	Talcahuano, Chile.	Liverpool, England General.....	6,937	13,137	9,067
Maria Bakke 4,	11	9-30	11	13-49	11-25	12	2-05	Scand.-So. Pacific Co.,	375.6	52.0	23.0	Corral, Chile.	Oslo, Norway.....	6,068	6,077	4,586
Santa Maria 4,	11	11-15	11	14-07	11-21	12	7-50	Grace Line.	466.0	64.0	25.0	V. paraiso, Chile.	New York, N. Y., General.....	4,442	10,626	6,080

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL

* ARRIVALS.										* DEPARTURES.									
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—												
October 5.	Inapaquina 11.	A. Tagaropoulos	Colon, Rep. of Panama.	October 5.	Inapaquina 11.	A. Tagaropoulos	Colon, Rep. of Panama.												
October 5.	Calafes 12.	United Fruit Co.	Port Limon, Costa Rica.	October 5.	Magallanes	Spanish Line	Barcelona and waypts.												
October 5.	No. 9770 12.	Pan American Airways	Miami via wayports.	October 5.	No. 142-M 12.	Pan American Airways	Miami via wayports.												
October 5.	No. 144-M 12.	Pan American Airways	La Guayra and wayports.	October 5.	No. 9664 12.	Hamburg-American Line	Hamburg and waypts.												
October 5.	Casilla	United Fruit Co.	Puerto Colombia.	October 5.	Magdalena	Hamburg-American Line	Hamburg and wayports.												
October 6.	Tolon	United Fruit Co.	New York via Habana.	October 5.	Calamara 12.	United Fruit Co.	Talara via wayports.												
October 6.	Smaland	J. S. Webster	Kingston, Jamaica.	October 5.	No. 300-N 12.	Pan American-Graeco Airways	Talara via wayports.												
October 6.	Cordoba C-40 12.	Seadta Airplane Co.	Barranquilla and waypts.	October 5.	Cartago	United Fruit Co.	Port Orleans and waypts.												
October 6.	Ainetta 1.	A. Tagaropoulos	Colon, Rep. of Panama.	October 6.	Casilla	United Fruit Co.	Port Limon, Costa Rica.												
October 6.	Anachucuma 11.	United Fruit Co.	Colon, Rep. of Panama.	October 6.	Fernina Carvaldo 11.	Ramon Carvaldo	Bluefields, Nicaragua.												
October 6.	Vermint Carvaldo 12.	Ramon Carvaldo	Colon, Rep. of Panama.	October 6.	Anchucuma 11.	United Fruit Co.	Colon, Rep. of Panama.												
October 7.	No. 300-N 12.	Pan American Airways	San Salvador and waypts.	October 6.	Ainetta 1 12.	A. Tagaropoulos	Colon, Rep. of Panama.												
October 7.	No. 9670 12.	Pan American-Graeco Airways	Talara via wayports.	October 8.	No. 9685 12.	Pan American Airways	San Salvador and waypts.												
October 8.	Aicon	Panama R. R. S. S. Line	New York via Haiti.	October 8.	No. 9776 12.	Pan American Airways	Port Limon, Costa Rica.												
October 8.	Arguani	Elders & Fyries Line.	Avonmouth via wayports.	October 8.	Tolon	United Fruit Co.	Puerto Cabezas, N.C.												
October 8.	Santa Marta	United Fruit Co.	Avonmouth via Kingston.	October 8.	Arguani	Elders & Fyries Line.	Avonmouth via wayports.												
October 8.	Tels.	United Fruit Co.	New Orleans, La.	October 8.	Canden	United Fruit Co.	Chiriquo via wayports.												
October 8.	No. 9137 12.	Pan American Airways	Miami via wayports.	October 8.	Inapaquina 11.	A. Tagaropoulos	Colon, Rep. of Panama.												
October 8.	No. 9664 12.	Pan American Airways	San Salvador and waypts.	October 9.	No. 300-N 12.	Pan American-Graeco Airways	Talara via wayports.												
October 9.	Inapaquina 11.	A. Tagaropoulos	Colon, Rep. of Panama.	October 9.	No. 144-M 12.	Pan American Airways	La Guayra and waypts.												
October 10.	Bogota	Colombian S. S. Line	New York via wayports.	October 9.	Santa Marta	United Fruit Co.	New York via wayports.												
October 10.	Athanida	Standard Fruit & S. S. Co.	New Orleans via Habana.	October 9.	Tela	United Fruit Co.	Bocas, Rep. of Panama.												
October 10.	Christian Krohg.	Aluminum Line	Panama, Fla.	October 9.	Smaland	J. S. Webster	Kingston, Jamaica.												
October 10.	Tels.	United Fruit Co.	Bocas, Rep. of Panama.	October 9.	No. 9670 12.	Pan American Airways	San Salvador and waypts.												
October 11.	No. 300-N 12.	Pan American-Graeco Airways	Talara via wayports.	October 10.	Bogota	Colombian S. S. Line	New York via wayports.												
October 11.	No. 144-M 12.	Pan American Airways	La Guayra via wayports.	October 10.	Christian Krohg.	Aluminum Line	Paramaribo and waypts.												
October 11.	No. 9685 12.	Pan American Airways	San Salvador and waypts.	October 10.	Cordoba C-40 12.	Seadta Airplane Co.	Barranquilla and waypts.												
October 11.	No. 142-M 12.	Pan American Airways	Miami via wayports.	October 11.	Athanida	Standard Fruit & S. S. Co.	New Orleans and waypts.												
October 11.	Nueva Espana 12.	Diez & Garcia	Colon, Rep. of Panama.	October 11.	Tela	United Fruit Co.	New Orleans and waypts.												
October 11.				October 11.	No. 9664 12.	Pan American Airways	San Salvador and waypts.												
October 11.				October 11.	Nueva Espana 12.	Diez & Garcia.	Colon, Rep. of Panama.												

11 Motor boat. 12 Air mail carrier. 13 Motor schooner.

PORT OF BALBOA.

October 10.....	Guardian.....	All America Cables, Inc.	Iquique, Chile
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* Other than ships passing through the Canal.

United States Intercoastal Traffic by Commodities for September, 1930.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the totals for September, 1930, and the totals for September, 1929 and 1928. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Agricultural implements.....	1,249	27	1,276
Alfalfa.....		3,067	3,067
Alfalfa meal.....		1,054	1,054
Ammonia.....	26	25	51
Asbestos.....	156		156
Asphalt.....	39	275	395
Automobiles.....	3,827	315	4,142
Automobile accessories.....	4,991	174	5,165
Bark.....		7	7
Barley.....	32	50	82
Beans.....	63	2,857	2,920
Borax.....	12	903	915
Bricks.....	197		197
Burlap.....	316	45	361
Calcium carbide.....	70		70
Camphor.....		15	15
Canned goods:			
Fish.....	529	25,006	25,535
Fruit.....	107	41,939	42,046
Meat.....	107	3,320	3,427
Milk.....	40	663	703
Soup.....	2,224	390	2,614
Vegetables.....	455	6,892	7,347
Miscellaneous.....	907	4,726	5,633
Carbon black.....	61		61
Celite filtercel.....		325	325
Cement.....	428		428
Charcoal.....	40	100	140
Chemicals.....	1,319	820	2,139
China and fire clay.....	598	26	624
Coal.....	1,925		1,925
Cocoa.....	101	15	116
Coconuts.....	11	334	345
Coffee.....	261	97	358
Cold storage:			
Beef.....		120	120
Cheese.....		250	250
Eggs.....	11	100	111
Fish.....	32		32
Lard.....	268	10	278
Other.....	421	99	511
Confectionery.....	896		896
Cotton.....	256	1,242	1,498
Cottonseed meal.....		512	512
Drugs.....	1,799	88	1,887
Earthenware.....	37	14	51
Eggs, dried.....		11	11
Explosives.....	19	123	142
Fertilizer.....	588	50	638
Flour.....	226	5,815	6,041
Fruit:			
Dried.....	183	9,873	10,056
Fresh.....	19	707	726
Fuller's earth.....		41	41
Furniture.....	284	52	336
General.....	39,395	19,201	58,596
Glass and glassware.....	1,778	513	2,291
Glue.....	184		184
Granite.....	53		53
Guano.....	500		500
Hair.....		51	51
Hardwoods.....	1,261		1,261
Hay.....		4,077	4,077
Hemp.....		767	767
Honey.....		231	231
Hops.....		69	69

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Infusorial earth	22	118	140
Ink	26		26
Ivory nuts	21		21
Jute	20		20
Kapok		21	21
Lard substitute	1,091		1,091
Leather	9		9
Lime	14		14
Linoleum	785	100	885
Liquors	24	123	147
Livestock	174		174
Lumber	2,306	139,442	141,748
Manufactured goods:			
Iron and steel	76,819	1,374	78,193
Machinery	6,959	318	7,277
Railroad material	5,987		5,987
Tinplate	7,387		7,387
Textiles	2,276	723	2,999
Miscellaneous	4,620	2,133	6,753
Marble	90		90
Matches	233		233
Metals:			
Copper		5,184	5,184
Iron	800	1,000	1,800
Lead	81	1,441	1,522
Scrap	322	728	1,050
Tin		90	90
Zinc		1,550	1,550
Other	50	150	200
Milk, powdered	100	871	971
Molasses	172		172
Musical instruments	17		17
Nitrates	30		30
Nuts		50	50
Oats	107	16	123
Oils:			
Cottonseed	518		518
Crude	521		521
Gas oil, fuel oil	79	34,521	34,600
Gasoline, benzine, naphtha	7,959	195,582	203,541
Lubricating and greases	7,648	503	8,151
Olive	17		17
Vegetable	175	53	228
Whale		700	700
Wood		7	7
Other	129	30	159
Ores:			
Copper	500	1,351	1,851
Magnesite		964	964
Paint	669		669
Paper	4,349	9,486	13,835
Paper pulp	46	10,217	10,263
Paper roofing	22	48	70
Peanuts	274	85	359
Peas		213	213
Phosphates	4,312	170	4,482
Porcelain	236	622	858
Quicksilver		1	1
Rags	11	113	124
Rice	836	49	885
Rope	107	79	186
Rosin	485		485
Rubber, manufactured	648	92	740
Salt	170	69	239
Seeds:			
Grass		980	980
Hemp		115	115
Other	18	247	265
Shells	733		733
Silk		1,922	1,922
Skins and hides		2,167	2,167
Slag	859		859
Slate	635		635
Soap	3,876	395	4,271
Soda	254		254
Soda ash	1,926		1,926
Soda, bicarbonate	105		105
Soda, caustic	44		44
Starch	75		75
Sugar	17	16,650	16,667
Sulphur	5,256		5,256
Syrup	94	14	108
Tallow		169	169
Tar	13		13
Tea		63	63

	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Tobacco.....	1,332	85	1,417
Toys.....	489	10	499
Turpentine.....	30		30
Vegetables.....	23	165	188
Waste.....	25	181	206
Wax.....	12 ¹		12 ¹
Wheat.....		196	196
Wine.....		55	55
Wool.....	12	1,922	1,934
Total, September, 1930.....	224,391	573,197	797,588
Total, September, 1929.....	261,679	623,024	884,703
Total, September, 1928.....	242,952	603,846	846,798

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending October 11, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Baralt.....	Royal Netherlands S. S. Co.....		October 5.....		53
Magdalena.....	Hamburg-American Line.....		October 5.....		435
Cartago.....	United Fruit Co.....		October 5.....		102
Caldas.....	National Navigation Co.....		October 10.....		147
Cali.....	North German Lloyd.....		October 11.....		236
Calamares.....	United Fruit Co.....	October 5.....	October 5.....	31	738
Vancouver.....	Hamburg-American Line.....	October 5.....	October 5.....	37	339
Virgilio.....	Italian S. S. Line.....	October 5.....	October 5.....	35 ¹	304
Tai Yin.....	Barber S. S. Line.....	October 5.....	October 5.....	(¹) 2	
Damsterdijk.....	Pacific Steam Navigation Co.....	October 5.....	October 6.....	79	228
Arkansas.....	French S. S. Line.....	October 5.....	October 6.....	634	(²)
Venezuela.....	Panama Mail S. S. Co.....	October 5.....	October 7.....	259	631
Castilla.....	United Fruit Co.....	October 6.....	October 6.....	23	15
Santa Inez.....	Grace Line.....	October 6.....	October 7.....	27	206
Toloa.....	United Fruit Co.....	October 6.....	October 8.....	689	1
Pacific Ranger.....	Furness, Withy & Co.....	October 6.....	October 9.....	(¹)	265
Nosa King.....	N. O. & S. A. S. S. Co.....	October 7.....	October 9.....	539	139
Ancon.....	Panama R. R. S. S. Line.....	October 8.....	October 9.....	3,207	
Champerico.....	Pacific Steam Navigation Co.....	October 8.....	October 8.....	254	
Kinderdyk.....	Pacific Steam Navigation Co.....	October 8.....	October 8.....	(¹)	161
Oregon.....	French S. S. Line.....	October 8.....	October 8.....	47	115
Santa Marta.....	United Fruit Co.....	October 8.....	October 9.....	351	300
El Salvador.....	Panama Mail S. S. Co.....	October 8.....	October 9.....	516	199
Tela.....	United Fruit Co.....	October 8.....	October 9.....	942	74
Manizales.....	North German Lloyd.....	October 9.....	October 9.....	911	
Nevada.....	French S. S. Line.....	October 9.....	October 9.....	25	(²)
Villanger.....	Westfal, Larsen & Co.....	October 9.....	October 9.....	63	(²)
Ludwigshafen.....	North German Lloyd.....	October 9.....	October 10.....	206	26
San Lucas.....	Quaker Line.....	October 10.....	October 10.....	82	(²)
Bogota.....	United Fruit Co.....	October 10.....	October 10.....	120	45
Christian Krohg.....	Aluminium Line.....	October 10.....	October 10.....	369	(²)
Aprimac.....	Peruvian Line.....	October 10.....	October 10.....	58	(²)
San Jose.....	United Fruit Co.....	October 10.....	October 11.....	574	(²)
Atlantida.....	Standard Fruit & S. S. Co.....	October 10.....	October 11.....	190	370
Ebro.....	Pacific Steam Navigation Co.....	October 11.....	October 11.....	64	
Oroya.....	Pacific Steam Navigation Co.....	October 11.....	October 11.....	18	
Tela.....	United Fruit Co.....	October 11.....	October 11.....	90	140
Takiwa Maru.....	Nippon Yusen Kaisha.....	October 11.....	October 11.....	100	(²)
Santa Maria.....	Grace Line.....	October 11.....	October 11.....	(¹)	192

¹ No cargo discharged.

² No cargo laded.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 9, 1930.

No. 776.

Panama, west coast, Burica Islet, light established. The following is quoted from Notice to Aviators No. 10, Washington, D. C., September 15, 1930:

A flashing white light, period 1 second, has been established on Burica Islet, off Burica Point, Panama. The light is exhibited 105 feet above high water. Approximate position: Lat. 8° 02' 00" N., long. 82° 53' 32" W.

H. BURGESS,
Governor.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Entered as second-class matter February 6, 1918, at the Post Office
at Cristobal, C. Z., under the Act of March 3, 1879.



Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., October 22, 1930. No. 12.

Classification of Cargo Passing Through the Panama Canal, Showing Origin and Destination, During Fiscal Year Ended June 30, 1930.

A statement of all commodities passing through the Panama Canal, showing origin and destination, during the fiscal year ended June 30, 1930, is shown in Tables I and II on pages 152 to 163 of this issue. From the cargo declarations submitted by masters of vessels it has been possible to classify over 87 per cent of the cargo passing from the Atlantic to the Pacific during the year, and almost 99 per cent of that passing from the Pacific to the Atlantic.

PRINCIPAL COMMODITIES—ATLANTIC TO PACIFIC.

Commodities shipped to the Pacific which aggregated more than 100,000 tons in any of the past four fiscal years are listed in the following tabulation:

Commodity.	Fiscal year ended June 30--			
	1927.	1928.	1929.	1930.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Manufactures of iron and steel.....	1,971,964	1,855,532	2,349,566	2,128,712
Mineral oils.....	649,379	717,080	806,744	682,742
Phosphates.....	183,521	198,826	281,168	435,994
Cement.....	222,817	280,032	379,968	412,347
Tinplate.....	194,111	143,610	261,899	294,382
Paper.....	150,722	183,263	224,276	259,314
Cotton.....	361,241	259,225	331,652	248,345
Coal and coke.....	186,522	252,740	227,833	224,439
Sulphur.....	211,625	207,257	233,231	215,831
Automobiles (exclusive of accessories).....	127,882	124,553	259,688	203,089
Scrap metal.....	23,354	48,163	83,829	196,676
Railroad material.....	189,858	188,561	230,074	194,578
Machinery.....	172,150	215,334	188,442	180,805
Ammonia.....	134,977	91,776	108,862	153,437
Textiles.....	91,967	124,658	137,886	120,750
Canned goods (fish, fruit, vegetables, etc.).....	44,192	87,136	121,472	120,373
Tobacco.....	81,457	78,943	129,433	118,322
Sugar.....	282,912	44,951	150,402	101,150
All other.....	3,302,676	3,208,489	3,371,045	3,184,439
Total.....	8,583,327	8,310,134	9,882,520	9,475,725

Total cargo from the Atlantic to the Pacific during the year showed a decrease of 406,795 tons as compared with the fiscal year 1929 (which established the high record for a year's cargo tonnage passing through the Canal from the Atlantic to the Pacific) but was 1,165,591 tons higher than in the fiscal year 1928. Of the 18 commodities shown in the foregoing tabulation, 12 show decreases and 6 increases. Manufactures of iron and steel, the commodity of the heaviest tonnage from the Atlantic to Pacific, most of which was in the U. S. intercoastal trade, decreased 220,854 tons. The commodity showing the largest increase was phosphates, shipments of which were 154,826 tons greater than in 1929, a gain of 55 per cent, largely in the trade from the east coast of the United States to the Far East. The commodity showing the second largest increase was scrap metal, shipments of which were 112,847 tons greater than in 1929, a gain of more than 135 per cent. The scrap was carried mostly over the route from the United States to the Far East. The gains shown in other commodities were unimportant in volume.

The effects of the world-wide business depression are well illustrated by the decline in shipments of the following commodities, covering a wide scope of business activity. For each commodity is shown the loss in tons from the previous year: Manufactures of iron and steel, 220,854; mineral oils, 124,002; cotton, 83,307; sugar, 49,252; automobiles, 47,599; railroad material, 44,496; sulphur, 22,400.

The five other principal commodities showing declines were less than 20,000 tons under shipments in 1929.

PACIFIC TO ATLANTIC.

The principal commodities shipped to the Atlantic which aggregated more than 100,000 tons in any of the past four fiscal years are listed in the following tabulation:

PACIFIC TO ATLANTIC.

	Fiscal year ended June 30—			
	1927.	1928.	1929.	1930.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Mineral oils.....	7,143,165	5,619,076	5,197,813	5,700,587
Lumber.....	3,139,113	3,673,832	3,311,875	3,530,879
Ores (principally iron).....	1,648,862	1,600,483	1,750,548	2,229,470
Nitrate.....	1,174,384	2,565,572	2,554,565	1,910,793
Wheat.....	1,477,376	3,035,834	2,365,555	1,503,035
Sugar.....	427,035	577,781	717,931	920,399
Canned goods (fish, fruit, vegetables, etc.).....	714,696	771,793	921,217	806,365
Metals, various.....	508,807	626,683	671,500	666,057
Food products in cold storage *.....	245,520	238,952	315,675	335,061
Barley.....	344,341	237,262	260,142	275,064
Fruit, dried.....	200,433	272,644	304,956	206,384
Wool.....	129,906	167,931	150,712	145,071
Fruit, fresh.....	97,969	93,457	211,854	144,880
Beans.....	73,569	127,168	154,782	112,679
Copra.....	81,685	83,143	119,586	109,172
Pulp.....	3,099	14,734	49,623	108,861
Flour.....	90,938	112,191	110,133	103,486
Cotton.....	107,311	95,724	109,825	103,408
Coffee.....	113,313	132,862	136,369	102,646
Paper.....	23,549	49,657	62,191	101,422
All other.....	1,419,767	1,173,746	1,303,584	1,438,788
Total.....	19,164,888	21,320,575	20,780,486	20,554,507

* Does not include fresh fruit.

For the second successive year, the Pacific to Atlantic cargo movement declined, the decrease in 1930 amounting to 225,979 tons under 1929 shipments, and 766,068 tons under 1928, in which fiscal year the high record for cargo tonnage passing through the Canal from the Pacific to the Atlantic was established.

Of the 20 commodities shown in the foregoing tabulation, 12 show decreases and 8 increases. Shipments of the three items of heaviest tonnage, mineral oils, lumber, and ores (principally iron), all showed increases, amounting to 502,774 tons, 219,004 tons, and 478,922 tons, respectively. Other commodities showing important increases over the 1929 shipments were sugar, pulp, and paper, with gains of 202,468 tons, 59,238 tons, and 39,231 tons, respectively.

The largest decreases occurred in shipments of wheat and nitrates, which showed losses of 862,520 tons and 643,772 tons, respectively. Five other commodities (coffee, beans, dried fruit, fresh fruit, and canned goods) showed losses ranging from 34,000 to 115,000 tons compared with the 1929 shipments. The routes most affected by the decrease in wheat shipments were from the west coast of Canada and United States to Europe. Decreases in the nitrate shipments occurred largely in the movements from the west coast of South America to Europe and the United States.

CARGO FROM THE ATLANTIC TO PACIFIC—ORIGIN AND DESTINATION.

During the fiscal year 1930, 65.5 per cent of the cargo passing through the Canal Pacific-bound originated on the eastern and Gulf seabords

of the United States, and 25.8 per cent in Europe. During the past four fiscal years these areas have contributed over 90 per cent of the cargo moving in this direction.

Four areas absorbed all of the cargo in this direction, as follows: West coast of North America, 49 per cent; Asia, 22.3 per cent; Australasia, 13.7 per cent; and South America, 15.0 per cent.

The following graphs and figures show the tonnage and percentage of total from and to the principal regions, or origin and destination, for the fiscal year 1930, together with the percentages for the fiscal years 1929, 1928, and 1927:

	Long tons.	Percent of total—			
		1930.	1929.	1928.	1927.
<i>Origin:</i>					
United States	6,203,780	65.5	66.2	64.1	67.4
Europe	2,451,778	25.8	24.1	25.6	22.1
All other	820,167	8.7	9.7	10.3	10.5
<i>Destination:</i>					
North America	4,643,846	49.0	48.6	49.3	48.0
Asia	2,117,019	22.3	22.2	20.6	21.6
Australasia	1,288,289	13.7	14.7	15.6	17.7
South America	1,426,571	15.0	14.5	14.5	12.7

CARGO FROM THE PACIFIC TO ATLANTIC—ORIGIN AND DESTINATION.

During the fiscal year 1930 four regions furnished the total cargo tonnage from the Pacific to the Atlantic through the Canal, as follows: West coast of North America, 65.3 per cent; west coast of South America, 26.2 per cent; Australasia, 4.4 per cent; and Asia, 4.1 per cent.

Approximately 60 per cent of the cargo Atlantic-bound through the Canal in the fiscal year 1930 was destined to the eastern seaboard of the United States, and 36.8 per cent to Europe. These two regions have absorbed over 92 per cent of the Atlantic-bound cargo during the past four fiscal years.

The following graphs and figures show the tonnage and percentage of the total from and to the principal regions, or origin and destination, for the fiscal year 1930, together with the percentages for the fiscal years 1929, 1928, and 1927:

	Long tons.	Percent of total—			
		1930.	1929.	1928.	1927.
<i>Origin:</i>					
North America	13,082,391	63.6	63.8	69.0	71.6
South America	5,671,970	27.6	29.0	25.5	23.1
Australasia	868,712	4.2	3.6	3.2	3.0
Asia	931,434	4.6	3.6	2.3	2.3
<i>Destination:</i>					
United States	11,933,325	58.3	54.1	54.0	60.0
Europe	7,312,674	35.6	39.5	36.4	29.4
All other	1,258,508	6.1	6.4	9.6	10.6

TOTAL CARGO.

Total cargo in long tons through the Canal during the past four years has been: 1930, 30,030,232; 1929, 30,663,006; 1928, 29,630,709; and 1927, 27,748,215. The cargo in the past fiscal year was less by 632,774 tons or about 2 per cent than that in the fiscal year 1930, which was the greatest quantity in any fiscal or calendar year to date.

Table I.—Classification of Cargo Passing Through the Panama Canal

ATLANTIC TO

(Figures represent tons of 2,240 pounds.)

Commodity.	United States interoceanal.	East coast United States to west coast Central America.	East coast United States to west coast South America.	East coast United States to Hawaiian Islands.	East coast United States to Australasia.	East coast United States to Philippine Islands.	East coast United States to Far East.	Canadian interoceanal.
Airplanes.....	23	21	108			32	43	
Agricultural implements.....	15,559	40	5,134	29	15,383	697	3,013	647
Alfalfa.....	40				3,267			
Ammonia.....	2,003			32,727	850	12,513	99,549	15
Ammunition.....	156				5			2
Asbestos.....	2,641		137					4,991
Asphalt.....	4,342	5	4,367		12,190	72	8,675	698
Automobiles.....	39,783	495	23,074	189	65,080	4,867	30,662	14
Automobile accessories.....	18,316	389	7,888	45	25,294	2,071	16,232	3
Bananas.....								
Bark:								
Quebracho.....								
Other.....	502							
Barley.....	151		8					
Beans.....	524		35		24			
Blood and tankage.....	23							
Bones and bone meal.....	150		65				58	
Borax.....	725					49		
Bran.....								
Bricks.....	2,622		4,054		1,271	102	324	
Burlap.....	3,258	17	3,541			16		
Calcium carbide.....	997	62	47		49	278		35
Canned goods:								
Fish.....	4,234		32		60		20	277
Fruit.....	6,623		37		85	15	212	751
Meat.....	1,391		126	2	200	57	11	118
Milk.....	263		2,493			311	228	50
Soup.....	25,311	3	3	54	23	16	2	12
Vegetables.....	9,206		74	4	175	59	121	55
Miscellaneous.....	27,260	513	2,540	2	3,082	1,350	898	2,746
Carbon black.....	1,334				17	28	2,663	
Celite filtercel.....	215							
Cement.....	9,284		6,438	64	995	145	1,058	
Chalk.....					40			
Charcoal.....	1,790		1,467				30	
Chemicals.....	23,901	269	4,851	48	910	730	11,026	60
China and fire clay.....	2,518		232		15	80	165	
Coal.....	30,134	6,610	17,766					
Cocoa.....	682		32		1,055	70	177	16
Coconuts.....	162							
Coffee.....	1,956				2	2	13	
Coke.....	9,162		2,134					
Cold storage:								
Butter.....	85		27					
Cheese.....	475		231					
Eggs.....			17					
Fish.....	213			53			285	
Lard.....	2,312	70	3,910			2	3	
Meat.....	437		108			13		
Other.....	1,787		94			12	155	
Confectionery.....	10,256	3	8	4	20	80	152	30
Copra.....	544							
Cork.....	1,580							
Corn.....	156		5		3		308	
Cotton.....	3,622	40	293			104	243,399	
Cottonseed oil cake.....	35							
Crescote.....								
Cyanide.....	1,158	75			382	20	1,307	29
Drugs.....	15,110	374	209	30	101	15	246	310
Dyes.....	53				35	41	6,904	
Dyewoods.....	450						161	
Earthenware.....	2,558	13	159	6			21	
Explosives.....	909	15	374		218	38	314	5
Extract quebracho.....								
Fertilizer.....	3,448	102	59			2,437	4,610	
Flour.....	1,989		2,340		847	2,085	36,265	100
Fruit:								
Dried.....	941		18				400	
Fresh.....	564		116					
Fuller's earth.....	3,283							
Furniture.....	6,978	72	93	83		47	50	1,095

¹ East coast Central America to west coast South America, 6,582 tons; east coast Central America to Australasia, 55,113 tons.

Showing Origin and Destination, Fiscal Year Ended June 30, 1930.

PACIFIC.

(Figures represent tons of 2,240 pounds.)

East coast—Canada to Australasia.	East coast South America to west coast United States.	Cristobal to west coast United States.	Cristobal to west coast Central America.	Cristobal to west coast South America.	West India to west coast United States.	Europe to west coast United States.	Europe to west coast Canada.	Europe to west coast of Central America.	Europe to west coast South America.	Europe to Australasia.	Miscellaneous.	Total.
1,771			50			3	74	599	3,273	5,265	10	294
	58											51,517
						194	165		294	1,608	3,608	3,365
377						7	16		415	47		153,437
	89		405	2	230	23	3		978	3,933	61,695	163
17,967		22	1,348	7,858		53	120	14	1,639	9,857	47	8,631
9,964		21	38	93			2		1,094	2,853		97,712
		23,299									6,203	203,089
	25											84,213
		4										29,502
		250		2		173	33		57	10		25
	2,072	82							66	272	7	506
	9,343	61				7,782	241				112	226
	5,817							30		174	1,879	2,290
			68	22		3,688	649	51				19,518
47			11				10	1,040	3,153	260	23	1,039
258			5			20		22	150		368	5,891
									6,343	114		17,621
785		4	100	861		1,539	339	29	1,614	1,805	22	7,050
30			125	13		534	67		329	384	20	8,225
	6,440		52	2		11			135	530	1,978	9,225
			77	76					1,450	203	8	11,083
			7	7					5	233		5,159
						223	62	49	317	100		25,663
1,226	17		265	355		500	380	37	3,353	2,546		10,445
						45						47,077
18												4,087
55			796	730		71,397	6,397	27,534	257,022	9,724	20,658	4,087
						10,292	413	12	331	10		233
												412,347
77		160	17	60		15,514	2,824	1,428	9,832	10,540	458	11,098
						10,581	54		90	22		3,745
				83		6,611		30	58,255	15,471	6,000	82,417
182	3,342	933	19	178	263	154	51		12	54	196	13,757
		453	6									140,970
	40,090	14,731		410		758	545		3	266	1,327	7,466
				21		60,010	1,599		6,683	3,760	103	633
												60,103
			3	14								83,469
	411		5			1,373	24	22	401	6	60	191
												3,013
												17
			82	916		241	18		2	38		850
						10	10		134	30	4	7,433
	86							10				702
		31		89		259	68		54			2,579
106				4		357	105			25		11,150
												544
												5,003
	3,418					2,463	886		15	50		21,754
						286			186		17,364	248,345
						690	25		65			35
												64,844
			83			64,844						3,243
89		41		4	116	154	35					19,037
						463	1,079	4	551	239	48	7,470
						336	69		32			661
60				2		1,305	1,749	12	691	841		7,417
							121		2,123	911	24	5,073
	524		21								3,293	3,817
	865					3,093	45	302	1,810	2,810		19,581
235			376	4,274		79	23		573	342	86	49,614
52	3			3	10	631	843		181	418	33	3,533
						91	59	16		43	55	944
						434	24					3,791
4		2	104	11		224	178		9		10	8,960

* Includes 20,636 tons Europe to Balboa.

† East coast South America to west coast Canada.

Table I.—Classification of Cargo Passing Through the Panama Canal

ATLANTIC TO

(Figures represent tons of 2,240 pounds.)

Commodity.	United States intercoastal.	East coast United States to west coast Central America.	East coast United States to west coast South America.	East coast United States to Hawaiian Islands.	East coast United States to Australasia.	East coast United States to Philippine Islands.	East coast United States to Far East.	Canadian intercoastal.
General.....	578,672	5,159	44,499	13,759	44,440	15,944	75,079	12,048
Glass and glassware.....	24,886	129	1,992	46	597	327	579	504
Glue.....	258						60	
Granite.....	546						22	
Graphite.....	117				14			
Guano.....	27			1,880			7,560	
Hair.....	213						214	
Hardwoods.....	9,377		161		121	185		
Hats.....	5							
Hemp.....	366							10
Horns and hoofs.....								
Indigo.....							1,781	
Infusorial earth.....							65	
Ink.....	141		68		154	23	168	20
Ivory nuts.....								
Jute.....	713		177					
Lard substitute.....	9,457							12
Leather.....	23		3					33
Lime.....	508		398			50		10
Linoleum.....	9,276				169		24	
Liquors.....	1,274					6	503	
Livestock.....			5		15		100	
Lumber.....	31,568		5,384	135	315	328	586	20
Malt.....	1,575		158					
Manufactured goods:								
Iron and steel.....	1,231,971	4,983	92,023	13,619	20,848	59,674	180,081	6,312
Machinery.....	48,713	754	21,579	971	14,496	5,447	21,926	459
Railroad material.....	53,629	2,130	39,221	114	615	9,107	26,386	1,299
Tinplate.....	140,604	33	9,465	29,287	4	4,321	83,145	40
Textiles.....	41,544	882	9,929	225	2,019	5,453	1,969	580
Miscellaneous.....	97,427	458	6,106	1,606	5,880	3,938	10,379	558
Marble.....	1,648	44					22	
Matches.....	1,469	106						
Metals:								
Antimony.....			11				50	
Chrome.....	30							
Copper.....	2,761		32		30	50	130	
Gold and silver.....	14						1,354	
Iron.....	30,872		2,607		898	152	18,310	328
Lead.....	359		318		16		824	
Scrap.....	5,541		2,516		2		185,248	
Tin.....	77		606				567	
Zinc.....	260		546		4	16	52	
Other.....	575		29				1,630	2,741
Milk, powdered.....	2,092		609			206	173	
Molasses.....	1,851							
Musical instruments.....	228		24		54			35
Nitrates.....	1,933						769	
Nuts.....	191							20
Oats.....	747		431			49	173	
Oil:								
Coconut.....							18	
Cottonseed.....	1,388		76				33	
Crude.....	27,785		61		350		4	
Gas and fuel oil.....	202		41		1,359		17	
Gasoline, benzine, and naphtha.....	518		5,123		16,825	24	6,353	
Kerosene.....	101		905		25,281	22,765	238,008	
Linseed.....	2,692							
Lubricating and greases.....	70,261	462	16,831	114	50,207	4,279	61,042	15
Olive.....	365			9				
Vegetable.....	3,773		241		81		319	25
Wood.....	343		22					
Other.....	1,112		32			122		
Ore:								
Antimony.....								
Chrome.....	540							
Copper.....	5,190							
Gold and silver.....								54
Iron.....	68			15			1,000	
Lead.....								

* East coast South America to west coast Canada, 12,211 tons; West Indies to west coast South America, 12,300 tons.

Showing Origin and Destination, Fiscal Year Ended June 30, 1930.—Continued.
PACIFIC.—Continued.

(Figures represent tons of 2,240 pounds.)

East coast Canada to Australasia.	East coast South America to west coast United States.	Cristobal to west coast United States.	Cristobal to west coast Central America.	Cristobal to west coast South America.	West Indies to west coast United States.	Europe to west coast United States.	Europe to west coast Canada.	Europe to west coast of Central America.	Europe to west coast South America.	Europe to Australasia.	Miscellaneous.	Total.
3,995	4,169	1,098	71,177	42,171	83	47,271	26,610	7,056	100,577	85,581	5,634	1,185,022
31			50	24		11,538	4,944	388	11,595	10,397	35	68,062
						43	76					437
						815	125			160		1,668
	3,458					200						131
	52					310						13,125
45		151				39	7		76	155	27	10,558
								24	29	151		209
						107	42	39	8			572
				3								116
				43		10		11				1,784
									2			129
												576
	24	21		74		284	155	115	4,103	14	16	61
									25			5,635
						2,615			177			9,494
						18	104					50
27		14	278	45		190	5,803	621	4,214	8,612	1,827	4,260
3	35							24	246	27		9,951
			104	469		122	27	152	1,015	7,695	1,200	23,414
									1,388		105	762
												48,819
												3,527
27,962			1,306	967		128,759	50,898	4,202	163,087	131,400	10,620	2,128,712
334		17	458	397	33	2,706	2,294	2,307	25,847	32,041	26	180,805
			32	253		1,448	436	3,960	27,132	28,292	533	194,578
				27		7	8,649	120	3,655	10,025		294,382
58			1,143	300	45	2,490	986	481	28,715	23,812	119	120,750
1,321			86	281		2,083	2,143	1,803	16,350	15,590	272	166,077
				43		3,997	143		990			6,887
						122		268	431	638	23	3,057
												61
												30
7								4		554	501	4,069
												1,368
												76,703
				84		10,307	2,992	620	6,026	3,507		6,718
							14		932	1,305	2,950	196,676
									36	333	3,000	1,573
				26					24	299		1,496
							8	29	505	50		5,295
								178	27	115		3,455
								5	350	29		1,861
55				1							10	429
										32		26,003
	382		6			15,305	2,022	418	452	1,905	3,193	1,403
	175		4	103		557	139				114	3,933
									227		2,024	
				12								30
												1,831
							11	20	14	52	24,511	52,808
									29		573,043	74,691
												44,727
			50	643		74	6		99	18	14,994	297,585
				122			30		11	278	10,084	4,708
							195	50	1,394	377		212,931
			58	115		446	1,129	8	3,698	2,567	1,599	8,781
				23		23		150	2,567		23	13,895
				15		5,557	87	3	6,939	439		551
						1,588	472				164	2,911
						22						
						880	110		523	132		
												20
												540
						3,141						8,331
												54
						1,274	171			95		2,623
												3,500

East coast South America to west coast South America, 8,530 tons; West Indies to west coast South America, 48,375 tons; east coast Central America to west coast South America, 3,854 tons; West Indies to Australasia, 12,284 tons.

Table I.—Classification of Cargo Passing Through the Panama Canal

ATLANTIC TO

(Figures represent tons of 2,240 pounds.)

Commodity.	United States intercoastal.	East coast United States to west coast Central America.	East coast United States to west coast South America.	East coast United States to Hawaiian Islands.	East coast United States to Australasia.	East coast United States to Philippine Islands.	East coast United States to Far East.	Canadian intercoastal.
Ore—Continued:								
Magnesite.....	18		1,069					
Manganese.....	804				40		11	
Tin.....	33						1,500	
Zinc.....	40	11				1	3,331	
Other.....	214							
Paint.....	8,118	32	418	2	163	69	334	387
Paper.....	72,454	621	1,899	2,272	3,126	1,631	13,993	1,199
Paper pulp.....	216		5		136	12	1,343	
Paper roofing.....	419		35		17		85	289
Patent fuel.....			206					
Peanuts.....	2,064							
Peas.....	154							
Phosphates.....	23,045		136	1,885	42	8,711	309,077	
Plaster.....	37		37		444		75	
Porcelain.....	1,381	15	390	10	45	11		56
Potash.....	5							
Quicksilver.....								
Rags.....	544					92	120	
Rice.....	6,414		2,640				30	
Rope.....	2,351		82	11				
Rtein.....	10,537	40	1,850			25	25,021	
Rubber:								
Manufactured.....	13,933	38	2,566	19	2,991	204	579	
Raw.....	249						29	
Scrap.....					64			
Salt.....	2,606					10	18	115
Sand.....	3,606		810				22	
Seeds:								
Canary.....	69							
Cotton.....	12		10		4	25	12	
Flax.....								
Grass.....	46				20			
Other.....	231						92	
Shells.....	15,015						50	
Silk.....			15		1			
Silversand.....								
Skins and hides.....	79		13				55	
Slag.....	11,675							
Slate.....	6,086				35			
Soap.....	28,865		192	35	14	2,648	149	
Soda.....	5,273	89	115		28	113	333	
Soda ash.....	19,517		155			40	542	
Soda bicarbonate.....	2,144		29			85	1,030	
Soda caustic.....	3,833	134	308			576	11,042	
Starch.....	969	23	399	10	43	173	489	60
Sugar.....	581		1,098	5	785		1,698	
Sulphur.....	115,137		56	1,355	82,733		6	
Syrup.....	2,285		267			195		79
Talc.....	69							
Tallow.....			15				16	
Tar.....	11,890				7	2		
Tea.....	125		20				5	75
Tobacco.....	25,526		105		14,416	362	72,679	131
Toys.....	1,077				10			
Turpentine.....	1,069		413		924	5	294	
Vegetables.....	135		1					
Waste.....	1,372		65					30
Wax.....	1,326	151	4,543		303	149	17,664	
Wheat.....	69		826				33,086	
Wine.....	163		442				59	
Wool.....	201							
Zinc oxide.....	615				19		25	
Total.....	3,161,530	25,470	378,101	199,731	422,839	176,114	1,896,397	39,495

* Africa to Australasia, 20,617 tons; Africa to Far East, 23,021 tons; east coast United States to west coast Canada, 1,100 tons.

Showing Origin and Destination, Fiscal Year Ended June 30, 1930.—Continued.

PACIFIC.—Continued.

(Figures represent tons of 2,240 pounds.)

East coast Canada to Australasia.	East coast South America to west coast United States.	Cristobal to west coast United States.	Cristobal to west coast Central America.	Cristobal to west coast South America.	West Indies to west coast United States.	Europe to west coast United States.	Europe to west coast Canada.	Europe to west coast of Central America.	Europe to west coast South America.	Europe to Australasia.	Miscellaneous.	Total.
						10	10					1,093
						7,314	4		23	11		8,209
											3,850	1,533
						12						7,245
						7,826	53			1,113	14	9,220
44						72	405	8	1,557	2,525	5	14,159
46,715			171	130		42,656	915	1,154	38,767	22,894	8,617	259,314
						12,908			959	7,464		23,043
												845
						144		13,000	23,951			37,301
				5								2,969
		200				89	39					482
				5		2,000	385	574	2,320	43,076	644,738	435,994
5,036									64			5,693
				19		677	346	47	2,342	1,113		6,452
						6,931	308		418	152	11,193	19,007
				1								1
						6,198						7,007
			70	4,001		880		20	13,136			27,191
						29	76		739			3,290
			146	82		56			693		1,243	39,693
1,233					12		39	33		239	1,293	22,279
										9		278
1,537											35	99
						13,502	4,756		227	24,619	6,937	54,327
						16,420	110					20,968
	1,151					14			57		11	1,302
5												68
	3,311								3			3,314
55	15					253	26			38		453
3	2,339			8		2,058	83		5	426		5,248
				86		30					1,567	16,748
						500			84	139		789
						62,037	300					62,337
		199	1			37			40	15	1,396	1,835
									4,172	43,048		66,945
						182	23			77		6,408
				321		68	59	65	454	93	75	32,773
				5					606	100	21	6,674
				5					917	418		21,624
						53			547			3,888
			18	146			369		896			17,372
				27		1,026			737			4,007
			179	27	23,571	963			564	245	71,434	101,150
			15			15		114			16,400	215,331
						50						2,867
				2		40	23		65			190
				23								60
53						107	9			3	85	12,221
				259		191	79		2,828			3,583
		2	17	9	32		2		178	4,485	358	118,322
						299	124			51		1,561
				11						48	145	2,810
	2	29				219	213		60	268		927
						157			5			1,530
				84	1,410	12			2,578		22	28,242
	50				105					6		31,133
				104	381		206	440	676	3,149	2,945	9,344
					2			4	9	132	6	848
						100	189					943
122,037	87,935	41,677	79,598	69,616	24,429	698,479	139,747	69,728	381,666	604,265	455,821	9,475,725

Cable Address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pan canal, Panama;" in the United States, "Pan canal, Washington."

Table II.—Classification of Cargo Passing Through the Panama Canal

PACIFIC TO

(Figures represent tons of 2,240 pounds.)

Commodity.	United States intercoastal.	West coast United States to east coast South America.	West coast United States to Cristobal.	West coast United States to West Indies.	West coast United States to Europe.	West coast Canada to east coast United States.	Canadian intercoastal.	West coast Canada to West Indies.
Airplanes.....	86	21						
Agricultural implements.....	1,074	14	103	30	5,495			
Alfalfa.....	3,937		21		149			
Alfalfa meal.....	5,364				184			
Asphalt.....	943	658	26	75	55,218			
Automobiles.....	1,311	11	53	10	5		2	
Automobile accessories.....	599	3	40		91			
Balsam.....								
Bamboo.....	83							
Bananas.....								
Bark:								
Cascara.....	169				101			
Peruvian.....								
Quillay.....								
Other.....	1,750							
Barley.....	913			479	231,491			
Beans.....	55,916	100	554	6,598			2	
Beeswax.....								
Blood and tankage.....								
Bones and bonemeal.....	101							
Borax.....	11,136	102	38	30	79,800			
Bran.....	137							
Bricks.....	55	30						
Burlap.....	812							
Camphor.....	823							
Canned goods:								
Fish.....	124,787	1,349	2,214	1,232	34,263	50	3,494	1,574
Fruit.....	276,779	302	1,649	2,483	121,876	3	3,361	
Meat.....	1,586		45		11		9	3
Milk.....	4,679		2,153	144				
Soup.....	259		37		154			
Vegetables.....	65,342	53	1,113	899	3,142		1	98
Miscellaneous.....	82,243	195	1,860	2,294	23,102		563	66
Carbon black.....	532							
Celite filtercel.....	6,031	25			2,038			
Cement.....	405	48	339	157				
Charcoal.....	437							
Chemicals.....	9,478	106			469			
China and fireclay.....	274		43		1,100			
Coal.....								
Cocoa.....	533				41			
Cocoa leaves.....	60							
Coconuts.....	3,101				4			
Coffee.....	1,736		388	116	1,001		2	
Coke.....								
Cold storage:								
Beef.....	19				4			
Butter.....	513		143					
Cheese.....	548							
Eggs.....	1,175	614	602	40				
Fish.....	154	38			2,984			
Lard.....	179		330	215	588			
Meat.....	125							
Mutton.....	37							
Other.....	827	25	355	15	143			
Confectionery.....	19	3	2					
Copra.....	1,089				16,987			
Corn.....					700			
Cotton.....	27,979		123		26,911			
Cottonseed oil cake.....	1,931				4,499			
Cottonseed meal.....	421				302			
Drugs.....	606				11			
Dyes.....				24				
Dyewoods.....	30				668			
Earthenware.....	496		33					
Eggs, dried.....	1,974							
Explosives.....	627	124	245	31				
Fertilizer.....	421			12				
Fish meal.....	20				2,135			
Flour.....	64,580	116	1,107	470	18,841			6,664
Fruit, dried.....	104,240	916	625	177	95,384			

* Includes 16,870 tons Far East to Europe.

* Includes 7,295 tons Far East to Europe.

Showing Origin and Destination, Fiscal Year Ended June 30, 1930.

ATLANTIC.

(Figures represent tons of 2,240 pounds.)

West coast Europe.	West coast Central America to Cristobal.	West coast Central America to Europe.	West coast South America to east coast of United States.	West coast of South America to Cristobal.	West coast South America to Europe.	Australasia to east coast United States.	Australasia to east coast Canada.	Australasia to Europe.	Philippine Islands to east coast United States.	Far East to east coast United States.	Miscellaneous.	Total.
				50	800	15	30					107
				9								7,611
												4,125
												5,548
												56,950
3	25		2	7	6	12	29	10				1,572
			1	2		3	11					664
	9			8								33
	12									4,827		5,447
		60										60
21				2						1,490		1,783
			17	73	83							173
18	8		42	15	1,572							1,629
6,266			5	20	167			45			390	2,403
	10		47	33,423	6,146						2,445	275,064
			8,811	1,471	2			91		9,662	23,318	112,679
			40									42
			146									194
			168									269
				26	771							91,921
			355	426	17,276							18,194
												85
										66		878
										509		1,332
14,435				135	71					176	8,095	191,875
2,560	10			2	30	1,041				27	11,243	421,455
					28	10	44	89				1,912
415								176				8,049
16								623				466
			184	3						32	32	70,899
1,011	5			12	185	20	64			49	40	111,709
												532
												8,094
												949
												437
	2		2,547	42		1				351	32	13,028
				50				150				1,417
11	81	4	2,803	12,942	2,257	79		742	104			200
			70	11	40							19,597
												181
	43,870	20,822	22,144	52,101	1,411	43		416	94			3,199
		269									2,995	147,045
												269
						1,394	552	14,431				16,507
				6		38	12,377	73,328			246	86,651
							597	72,557				73,702
346								2,063		871		5,711
2,211											19	5,406
			65					567				1,944
			21			10	321	5,015				5,492
8						1,170	1,449	129,537				132,201
15						258	53	5,700				7,447
					56							24
250	90		11	23	170	10,787		46,386	33,379			109,172
12,081					495							13,668
	405	22	8,605	498	36,696			355		1,174	640	103,408
			334	181	32,066							39,011
					100							823
			23	20	26						27	713
	5		17		13							59
	354	219			9			19			2,350	3,649
			19								106	654
										323		2,362
						2		9		140	628	1,806
3,687												433
11,176					532						500	6,342
603			265	64	28	3,969				100	13	103,486
												206,384

* Includes 8,061 tons Hawaii to east coast United States.

Table II.—Classification of Cargo Passing Through the Panama Canal

PACIFIC TO

(Figures represent tons of 2,240 pounds.)

Commodity.	United States intercoastal.	West coast United States to east coast South America.	West coast United States to Cristobal.	West coast United States to West Indies.	West coast United States to Europe.	West coast Canada to east coast United States.	Canadian intercoastal.	West coast Canada to West Indies.
Fruit, fresh	7,118	6,897	762		102,066			
Fuller's earth	152				134			
Furniture	1,580							
General	134,847	3,580	3,273	5,943	22,721	2,019	1,738	623
Glass and glassware	1,748		151		600		54	
Glue	528				139			
Graphite								
Guano	98							
Gum:								
Kauri						2		
Yuca								
Other	50							
Hair	902							
Hardwoods	1,079		77		336		9	
Hats								
Hay	3,119				56			
Hemp	12,418				1			
Honey	1,014	5			2,192			
Hops	898				2			
Horns and hoofs	26				2			
Indigo								
Infusorial earth	523	193			1,181			
Iodine		1						
Ivory nuts								
Jute	646				57			
Linoleum	744				10		1,443	386
Liquors	55				12			
Livestock								
Lumber	2,205,097	24,702	2,496	19,586	534,937	333,703	139,907	37,082
Manufactured goods:								
Iron and steel	20,457	2,237	865	200	1,137			
Machinery	10,800	1,015	856	133	1,675		13	
Railroad material	102						2,614	
Tinplate	890							
Textiles	4,014	68	239	6	897			
Miscellaneous	33,178	78	553	37	3,676	72		171
Marble	169							
Matches	136							
Metals:								
Antimony	2,100							
Copper	106,366				51,326	1,250		
Gold and silver	59							
Iron	458							
Lead	7,438	25			1,823			
Scrap	6,556				1,787			
Tin	1,063							
Zinc	19,974		40		621			
Other	633				50			
Milk, powdered	6,982		225		84			
Molasses								
Nitrates	42							
Nuts	2,527		7		400			
Oats	155	29	20		254			525
Oil:								
Coconut	869	6		11				
Cottonseed	7,813							
Crude	69,850			9,103	43,284			
Gas and fuel	450,692	11,094	117	23,978	76,692			
Gasoline, benzine, naphtha	2,632,817	1,652	3,411	46,786	1,187,729			
Kerosene	179,855	311	463	5,871	91,090			
Linsed	39				403			
Lubricating and greases	42,133	107	116	15	1,162		45	
Olive	678							
Vegetable	2,024	10		41	68			
Whale								
Wood	526	7			24			
Other	4,014							
Ore:								
Antimony	45							
Chrome								
Copper	7,390	121			3,470			

⁴ Includes 14,238 tons west coast United States to east coast Central America; 13,766 tons Far East to Europe; 9,784 tons west coast United States to Africa; 3,300 tons west coast Canada to Africa.

Showing Origin and Destination, Fiscal Year Ended June 30, 1930.—Continued.

ATLANTIC.—Continued.

(Figures represent tons of 2,240 pounds.)

West coast Canada to Europe.	West coast Central America to Cristobal.	West coast Central America to Europe.	West coast South America to east coast of United States.	West coast of South America to Cristobal.	West coast South America to Europe.	Australasia to east coast United States.	Australasia to east coast Canada.	Australasia to Europe.	Philippine Islands to east coast United States.	Far East to east coast United States.	Miscellaneous.	Totals.
5,161	3	100	2,505	43	152		15	19,800			249	144,880
												236
13,410	307		4,252	1,353	14,984	1,322	1,276	7,863	708	16,894	1,059	238,172
7										208	98	2,866
59			5,947		20,615			6,550			890	726
												890
						1,663	73	1,423				3,161
						195						195
						998	15	782	40			1,795
26			3	2	26	2				334		1,295
1,851	5,088	368	5,096	417	57	15,727	1,750	457	1,403		716	34,431
			68	99	13							195
				415	59							3,663
					58	4,679	79	4,562	4,027	1,673	53	28,702
2	58	56			1,673			437				5,497
								75				975
	2				4	214		17				265
35	35											35
			306		701							1,932
		317	8,215	12,455	0,483							1,007
				12								30,476
				3						426		1,084
2,396											300	4,633
											16	30
168,288	167		2	21		5,593			10,170	121	43,949	3,530,879
1,074	17		61	15	152	1	7		10	2	7	26,242
302	22		1,341	48	105	368		85		2	744	17,509
					0							2,722
										75		965
										2,753	47	8,024
116			6	57	18	76		2		1,815	216	40,071
												160
				5							10	151
			25		8					2,144		4,277
300		12	139,019	216	126,539	291			2,500	4		427,823
	62		793	11	285			3			8	1,221
			3,400		343						1,674	5,875
68,570			20,664		1,542			2,004			605	102,671
563	1				6,341			667			257	16,207
399					23,934	334		239		1,694		32,693
29,750					8,296			7,039		1,075	781	67,576
899			5,745		370			7		10		7,714
								4,690			3	11,984
									11,652			25,902
			626,933	766	1,151,210						14,250	1,910,793
			6	70					3	93	54	3,160
2,439			304	5	14,444						2,948	21,123
				91					93,270	778		95,034
			84	307				83			52	8,339
			315,373	84	25,638					54	348,825	812,211
											9,000	571,575
					122,887						187	3,995,484
						15						277,600
						10						493
				42	21	5		31			40	43,717
												678
				131	129		20	12	5,139	10,792		18,366
218		1,102			622	22,738		24,660				49,340
						28			100	15,924		16,609
700				22	119			17		15,496	893	21,261
			82		688					611		1,426
						26,955		5,400				32,355
			26,337	1,920	9,890	377				3,500		53,005

⁵ Includes 123,487 tons west coast South America to Egypt; 8,305 tons west coast South America to West Indies.
⁶ West coast South America to east coast Canada. ⁷ West coast United States to east coast Canada.

Table II.—Classification of Cargo Passing Through the Panama Canal

PACIFIC TO

(Figures represent tons of 2,240 pounds.)

Commodity.	United States intercoastal.	West coast United States to east coast South America.	West coast United States to Cristobal.	West coast United States to West Indies.	West coast United States to Europe.	West coast Canada to east coast United States.	Canadian intercoastal.	West coast Canada to West Indies.
Ore—Continued:								
Gold and silver.....	48							
Iron.....	446				7			
Lead.....						1,250		
Magnesite.....	17,922							
Manganese.....	6,281							
Tin.....	360				38			
Zinc.....	1,105							
Other.....	1,703	260			482			
Paint.....	5,876	16	25		3			
Paper.....	86,194	1,881	1,225	1,859	1,023	6,037		571
Paper pulp.....	87,569	535	50		11,077	7,940		
Paper roofing.....	107	15			42			
Peanuts.....	4,522		38					
Peas.....	1,616						84	
Phosphates.....	749					371		
Plaster.....	190							
Pollards.....								
Porcelain.....	11,076	8	96		4		86	
Quicksilver.....	1							
Rags.....	4,583				311			
Rice.....	558	1,293	260	11,442	2,421		396	
Rope.....	1,544							18
Rubber:								
Manufactured.....	1,510	2	16		547			
Raw.....	75				27			
Scrap.....	495				3,785			
Rye.....								
Salt.....	475							
Seeds:								
Cotton.....					205			
Grass.....	1,005				7			
Hemp.....	914							
Other.....	4,335				15	126		
Shells.....	242					15		
Silk, raw.....	19,846	2	7					
Skins and hides.....	25,038	4	11		79	20		
Slag.....								
Soap.....	1,943				217			
Soda.....	16							
Sugar.....	108,079		167					
Sulphur.....	127							
Syrup.....	237							
Talc.....	1,590		10		10	27		
Tallow.....	4,098	227	220	365		82		
Tar.....	26							
Tartar.....								
Tea.....	614							
Tobacco.....	1,236	525		535			908	
Toys.....	952			21		92		
Vegetables.....	2,252	19	1,126	101				
Waste.....	1,722				18	1,000		
Wax.....	1,730			261				
Wheat.....	3,131	573	380		15	436,970		
Wine.....	2,166							250
Wool.....	46,109	50						
Total.....	7,328,534	62,451	32,357	141,275	3,319,428	353,717	154,743	48,031

⁸ Includes 61,060 tons Far East to West Indies.

Revision of Telephone Directory.

The copy for a revised telephone directory, to be issued as of January 1, 1931, will go to the printer November 15, 1930. All changes or corrections in the present directory should be forwarded to the Telephone Supervisor, Balboa Heights, not later than November 7, 1930. Proof corrections will be made to December 1, 1930.

Showing Origin and Destination, Fiscal Year Ended June 30, 1930.—Continued.

ATLANTIC.—Continued.

(Figures represent tons of 2,240 pounds.)

West coast Europe.	Canada to Europe.	West coast Central America to Cristobal.	West coast Central America to Europe.	West coast South America to east coast of United States.	West coast of South America to Cristobal.	West coast South America to Europe.	Australasia to east coast United States.	Australasia to east coast Canada.	Australasia to Europe.	Philippine Islands to east coast United States.	Far East to east coast United States.	Miscellaneous.	Totals.
		7		775		2,789			2				3,621
500				1,901,564		842	76,912					2,000	1,981,771
				789		2,328							3,617
				3,935		919	27,058						19,172
				6		48,413	5,537		16		255		58,193
310				1,170		18,559							34,625
794				6,650		2,514	50		7,559		529		21,144
		4											20,541
													5,921
													101,442
													1,640
													108,861
													164
													4,833
1			3,000			415	142		3,892		141	478	9,769
									8,250				9,370
													190
													150
									729		90	6,527	19,210
													23
362									10				5,683
50				34	629						417		89,795
											5,328	67,354	1,680
									3	115			
25													2,110
67				80	82				93				375
													4,396
													182
													495
				162	8	205			695				36
						73	148	35	256				1,311
						20	4				50		1,824
				4	15	124	41	40	182		934		988
51							1,450		369				5,933
	155	2											2,263
													21,179
9	522	25		2,762	1,574	1,968	20,020	1,010	8,175		1,286		64,449
				89							3,216	16	89
						95							2,255
				739									755
				7,758	2,352	163,554		9,000	22,988	521,425	3,627	80,812	920,399
													127
													237
													1,637
25				14			706	172	15,842		283	42	22,026
									43		28		77
						8							31
											7,840		9,997
													1,899
													992
				1,898	66	51		50				1,501	7,064
													3,349
				72	18	21			5				1,107
1,036,889				73		5,829	85	42	8,078			10,920	1,503,035
				6		1,756		167	1,500				5,369
	3			2,583	57	2,953	10,957	352	76,767	15	5,228		145,071
1,390,786	52,278	26,378	3,144,475	91,096	1,934,744	238,803	34,606	594,930	685,277	132,907	787,091		20,554,507

⁹ Includes 5,472 tons west coast South America to east coast Canada; includes 74,656 tons Hawaii to east coast United States. ¹⁰ Includes 10,823 tons west coast Canada to east coast South America.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, October 18, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Ebro.	11	15	12	6	12	14	12	15	10	Pacific Steam Nav. Co.	450.3	37.8	24.8	New York, N. Y.	Talcahuano, Chile.	General.	2,720	9,291	6,301
City of	11	21	12	6	12	14	12	15	10	Pacific Steam Nav. Co., S.B.	401.0	54.2	22.0	New York, N. Y.	Fremantle, Aus'tia.	General.	1,500	7,087	5,241
Rayville	11	21	12	7	12	15	12	16	50	Williams S. S. Co., S.B.	337.8	52.2	18.0	Baltimore, Md.	Tacoma, Wash.	General.	2,903	5,684	4,070
Willaro	12	4	12	6	12	15	12	16	40	The Texas Co.	416.8	56.1	20.0	Pt. Arthur, Tex.	Los Angeles, Calif.	Ballast.	6,925	5,014	
New Jersey	12	6	12	7	12	15	10	17	40	Chilean Nitrate Prod.	412.0	56.0	14.6	Marsalles, France.	Arica, Chile.	Ballast.	6,778	4,837	
Bosworth	12	7	12	8	12	16	10	17	40	F. & W. Pills on	376.0	56.0	19.0	Liverpool, England.	Corral, Chile.	General.	1,994	5,112	3,511
Apple Branch	12	8	12	8	12	16	10	18	05	Medonley S. S. Co.	416.0	56.0	15.0	Cardiff, England.	Vancouver, B. C.	Ballast.	6,671	4,831	
Langbelem	12	10	12	10	12	17	10	18	15	Swayne & Hoyt	334.0	46.2	21.0	Corpus Christi, Tex.	Vancouver, B. C.	General.	2,933	2,023	2,017
Point Reyes	12	11	12	11	12	18	55	12	23	Johns on Line	392.0	53.0	22.6	Stockholm, Sweden	Vancouver, B. C.	General.	4,120	6,650	4,919
Annie	12	11	12	11	12	18	45	13	16	Dale & Co.	423.0	53.0	21.0	Newcastle, Eng.	Vancouver, B. C.	Ballast.	6,854	4,746	
Johnson	12	17	12	17	12	13	9	31	13	Argonaut S. S. Line	440.0	55.0	24.0	Baltimore, Md.	Seattle, Wash.	Steel, general.	7,753	8,324	6,036
Nurtation	12	23	12	6	15	13	13	27	50	Anglo-Amer. Oil Co.	513.0	68.0	18.0	London, England.	Los Angeles, Calif.	Ballast.	11,719	8,019	
Pomona	12	23	12	6	15	13	13	27	50	R. Chapman & Son	402.0	65.0	15.0	Cork, Ireland.	Vancouver, B. C.	Ballast.	5,612	4,119	
California	13	00	13	7	20	13	14	15	13	U. S. Army	89.0	22.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.	2,359	2,758	1,741
Standard	13	00	13	7	20	13	14	15	13	Ford Motor Co.	251.0	42.6	18.11	Chester, Pa.	Seattle, Wash.	Auto, parts	5,093	7,630	5,491
Carlton	13	7	13	10	13	17	41	13	18	Can. Nat. Steamships	439.0	54.0	25.6	Montreal, Canada	Dunedin, N. Z.	General.	5,781	4,129	
Gen. G. W.	13	11	13	11	13	17	41	13	18	R. Chapman & Son	401.6	51.3	27.11	Tyua, England	Seattle, Wash.	Ballast.	7,270	6,656	4,951
Lake Ormoc	13	18	13	6	10	14	14	15	39	Sir W. R. Smith & Sons	401.6	51.3	27.11	Tampa, Fla.	Saikoshin, China.	General.	8,316	10,817	7,562
Canadian	13	19	13	6	10	14	14	15	39	N. Z. Shipping Co.	415.8	56.0	20.6	Avonmouth, Eng.	Bluff, N. Z.	General.	6,775	4,841	
Constructor	13	19	13	6	10	14	14	15	39	The Texas Co.	446.0	56.0	20.6	Antwerp, Belgium	Los Angeles, Calif.	Ballast.	3,352	8,567	6,020
Riverton	14	1	14	7	15	14	14	16	45	Amer.-Hawaiian Line	415.0	59.0	23.7	Boston, Mass.	Seattle, Wash.	General.	4,600	9,294	6,861
Buchaness	14	3	14	8	15	14	14	16	15	Lackenbach Line	448.0	60.0	21.0	Boston, Mass.	Seattle, Wash.	General.	2,314	7,819	6,101
Tongarrig	14	8	14	8	15	14	14	16	15	Royal Neth. S. S. Co.	400.0	58.0	19.0	Cristobal, C. Z.	Gatun, C. Z.	Ballast.	2,209	5,879	4,121
New York	14	2	14	8	15	14	14	16	15	Can. Nat. Steamships	400.4	52.0	20.0	Montreal, Canada	Vancouver, B. C.	General.	3,500	3,984	2,628
Missourian	14	9	14	10	15	13	17	14	00	Pacific Steam Nav. Co.	405.0	54.2	20.6	New York, N. Y.	Seattle, Wash.	General.	6,253	7,331	5,091
Dorothy	14	17	14	18	10	15	9	08	15	Grace Line	433.3	63.0	24.9	Hull, England	Valparaiso, Chile.	General.	2,205	11,630	7,443
Lucenbach	14	17	14	18	10	15	9	08	15	Dona Lina	425.0	63.0	17.6	New York, N. Y.	Valparaiso, Chile.	General.	6,017	7,827	5,429
Toro Point	14	13	14	13	15	13	10	15	21	Standard Transp. Co.	368.0	53.0	23.11	Glasgow, Scotland.	Vancouver, B. C.	Gen. bananas.	6,464	5,413	3,965
Canadian	15	2	15	7	15	15	18	15	16	Seard-Sy, Pacific Line	410.0	56.0	20.0	Oslo, Norway	Corral, Chile.	General.	8,000	8,201	6,207
Ranger	15	10	15	10	15	17	32	15	18	Standard Transp. Co.	400.4	52.0	20.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	2,209	5,879	4,121
Tashmoo	15	10	15	10	15	17	32	15	18	Can. Nat. Steamships	324.0	54.2	20.6	Montreal, Canada	Seattle, Wash.	General.	3,500	3,984	2,628
Loriga	15	21	15	10	15	17	45	15	22	Nelson Line	405.0	54.2	20.6	New York, N. Y.	Seattle, Wash.	General.	6,253	7,331	5,091
Santa Clara	15	3	15	12	10	15	18	11	16	Pacific Steam Nav. Co.	433.3	63.0	24.9	Hull, England	Valparaiso, Chile.	General.	2,205	11,630	7,443
Nutaria	15	7	15	12	10	15	18	11	16	Grace Line	425.0	63.0	17.6	New York, N. Y.	Valparaiso, Chile.	General.	6,017	7,827	5,429
Vinland	15	3	15	12	10	15	18	11	16	Dona Lina	368.0	53.0	23.11	Glasgow, Scotland.	Vancouver, B. C.	Gen. bananas.	6,464	5,413	3,965
Tiger	15	18	15	19	10	16	11	14	16	Seard-Sy, Pacific Line	410.0	56.0	20.0	Oslo, Norway	Corral, Chile.	General.	8,000	8,201	6,207

* Motor ship.

† Launch.

‡ Tanker.

Counselor.....	14	17	25	16	6.08	16	43.12	16	14.20	British.....	395.5	52.2	18.3	Pt. Town d, Wash. Ballast.....	5,753	3,857	
Aohelina.....	15	23.00	16	7.00	16	14.45	16	15.45	16	15.00	.....	6.218	4,248	Los Angeles, Calif. Ballast.....	6,218	4,248	
Buth Kollong.....	16	7.25	16	8.25	16	17.00	16	18.00	16	18.00	American.....	4.500	6,205	4,284	Crescote.....	4,500	6,205
Tidewater.....	16	13.30	16	13.40	16	21.10	16	22.23	16	22.23	American.....	480.5	66.0	23.0	Los Angeles, Calif. Ballast.....	9,734	6,349
Somme.....	16	6.15	16	14.30	16	16	17.16	15	16.15	American.....	436.0	58.0	24.6	New York, N. Y. Ballast.....	246	.....
Tacama Star.....	16	18.25	16	17.05	17	9.41	17	10.35	17	10.35	British.....	450.0	53.5	21.6	Vancouver, B. C. Ballast.....	8,240	5,395
Savens.....	16	18.40	17	6.05	17	14.07	17	15.30	17	15.30	British.....	398.0	58.5	24.6	Brisbane, Australia. Asphalt.....	6,501	4,852
Pacific Oak.....	16	22.30	17	6.15	17	14.44	17	15.40	17	15.40	American.....	409.7	54.2	19.1	Seattle, Wash. General.....	3,189	6,687
President.....	17	5.45	17	7.20	17	15.40	17	21.35	17	21.35	American.....	502.0	62.0	23.0	San Francisco, Cal. General.....	4,054	12,583
Garfield.....	17	6.00	17	7.20	17	16.43	18	3.25	18	3.25	American.....	574.4	80.3	28.4	San Francisco, Cal. General.....	3,452	24,506
California.....	17	2.45	17	8.25	17	17.02	17	18.30	17	18.30	Danish.....	425.0	55.2	15.3	Portland, Ore. Ballast.....	7,382	5,663
Chile.....	17	3.45	17	8.40	17	17.32	17	19.16	17	19.16	British.....	407.0	52.0	20.10	La Libertad, Ecua. Ballast.....	6,046	4,326
El Chervo.....	17	4.40	17	9.40	17	17.57	17	23.10	17	23.10	American.....	500.0	68.2	25.0	Los Angeles, Calif. Ballast.....	11,225	7,913
F. H. Hillman.....	17	4.40	17	9.40	17	17.57	17	23.10	17	23.10	American.....	500.0	68.2	25.0	Los Angeles, Calif. Ballast.....	11,225	7,913
Champetec.....	18	22.30	17	9.50	17	18.33	17	20.10	17	20.10	British.....	290.0	41.7	18.0	Champetec, Guat. General.....	685	2,587
Chagry.....	17	6.35	17	9.50	17	18.54	17	20.28	17	20.28	Norwegian.....	289.5	40.0	17.0	La Paz, Mexico. Case oil.....	1,796	2,937
Aemie.....	17	15.15	17	15.50	17	22.45	18	4.54	18	4.54	American.....	435.0	56.0	18.6	Los Angeles, Calif. Ballast.....	7,165	4,926
Cedina.....	16	17.45	17	20.05	18	9.32	18	10.33	18	10.33	Italian.....	433.0	55.0	18.1	Vancouver, B. C. General.....	2,184	7,790
Chies Service.....	17	17.00	17	20.25	18	11.27	18	12.35	18	12.35	American.....	431.0	59.2	18.0	Los Angeles, Calif. Ballast.....	8,093	5,347
Oklahoma.....	17	17.00	17	17.35	18	11.27	18	12.35	18	12.35	American.....	431.0	59.2	18.0	Los Angeles, Calif. Ballast.....	8,093	5,347
Commauder.....	12	15.55	18	6.00	18	14.16	19	6.05	19	6.05	Colombian.....	107.0	22.0	9.0	Guam, C. Z. General.....	180	238
Canea.....	12	18.00	18	6.05	18	13.35	19	2.00	19	2.00	German.....	409.0	53.0	22.5	Buenaventura, Col. General.....	4,773	7,141
Emil Kirbort.....	17	9.25	18	6.10	18	14.18	18	16.45	18	16.45	German.....	431.0	61.0	21.11	Valparaiso, Chile. General.....	2,933	9,267
Seattle.....	17	11.35	18	7.20	18	15.05	18	3.18	18	3.18	Norwegian.....	449.0	58.2	15.5	Portland, Ore. Gen. banana.....	4,922	8,016
Knutie Nelson.....	17	14.30	18	7.20	18	15.38	18	16.45	18	16.45	German.....	449.0	58.2	15.5	Vancouver, B. C. General.....	7,816	5,755
Witell.....	17	21.00	18	8.20	18	16.05	18	20.00	18	20.00	Norwegian.....	460.0	59.0	21.0	Vancouver, B. C. Ballast.....	2,950	6,756
Havbor.....	18	6.40	18	8.40	18	16.32	18	17.40	18	17.40	American.....	404.0	53.0	17.10	San Francisco, Cal. General.....	5,280	4,716
Montana.....	18	6.40	18	8.40	18	16.32	18	17.40	18	17.40	American.....	404.0	53.0	17.10	Portland, Ore. General.....	5,280	4,716
Borgestad.....	18	9.45	18	9.50	18	17.28	18	18.50	18	18.50	Norwegian.....	351.0	51.0	23.0	Auckland, N. Z. Sulphur.....	6,597	4,989
City of.....	18	10.00	18	10.10	18	17.48	18	19.00	18	19.00	British.....	411.5	54.1	15.6	Vancouver, B. C. Ballast.....	345	223
Victoria.....	17	17.25	18	10.30	18	16.29	18	16.29	18	16.29	American.....	133.0	24.0	10.0	San Francisco, Cal. Ballast.....	190	1,132
Jandore.....	9	15.05	18	11.10	18	21.40	18	20.00	18	20.00	German.....	216.3	32.9	12.10	Guayaquil Ecuador General.....	4,900	4,346
Manzales.....	18	11.35	18	11.40	18	21.40	18	23.04	18	23.04	Spanish.....	350.4	50.1	20.3	Maloneo, Peru. (7).....	3,927	7,772
Marl.....	17	11.30	18	12.35	18	19.36	18	21.18	18	21.18	British.....	385.0	51.0	22.0	Vancouver, B. C. Gen. banana.....	7,307	6,207
Lochmonar.....	17	11.30	18	12.35	18	19.36	18	21.18	18	21.18	British.....	385.0	51.0	22.0	Vancouver, B. C. Gen. banana.....	7,307	6,207
Naples Maru.....	18	14.25	18	13.55	18	21.21	19	2.43	19	2.43	Japanese.....	355.0	61.0	25.10	Yokohama, Japan. Cotton, rosin.....	4,520	7,082
Chas. R.....	18	14.40	18	15.00	18	21.50	18	23.14	18	23.14	American.....	401.4	53.2	19.0	Seattle, Wash. (8).....	4,520	7,082
McCormick.....	18	14.40	18	15.00	18	21.50	18	23.14	18	23.14	American.....	401.4	53.2	19.0	Seattle, Wash. (8).....	4,520	7,082

* Tanker.

5 Transport.

6 Yacht.

7 Patent fuel and coke.

* General, pipe, steel, and iron.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Steelore.....	11	22.00	12	5.55	12	15.15	12	15.15	12	15.15	American.....	550.3	72.2	34.0	New York, N. Y. Iron ore.....	21,500	15,551
Swiftlight.....	10	15.45	12	6.51	12	15.50	12	15.50	12	15.50	American.....	464.6	60.2	20.4	Los Angeles, Calif. Ballast.....	8,473	6,050
Cauca.....	11	20.00	12	6.41	12	15.55	12	16.00	12	16.00	Colombian.....	107.0	22.0	9.0	Buenaventura, Col. General.....	166	238
Empire Arrow.....	12	60.30	12	7.17	12	17.06	12	17.05	12	17.05	American.....	463.3	62.7	27.4	Portland, Me. Gasoline.....	11,214	9,841
Gen. G. W.....	11	19.00	12	7.24	12	15.45	12	16.10	12	16.10	American.....	98.0	22.0	.....	Cristobal, C. Z. Lumber, general.....	8,260	6,425
Benreoch.....	11	19.00	12	8.13	12	16.10	12	16.10	12	16.10	British.....	420.1	54.0	25.3	Rotterdam, Holl'd. Lumber, general.....	8,260	6,425

* Tanker.

8 Junior mine planter.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Holmport	12	1 00	12	8 33	12	17 35	12	17 35	British.	J. & J. Denholm, Ltd.	423.5	56.0	25.0	Toopilla, Chile	Azores ¹²	Nitrates	8,800	4,650
Astral	12	5 30	12	9 16	12	18 15	12	18 15	American.	Standard Transp. Co.	439.5	58.0	23.0	Los Angeles, Calif.	New York, N. Y.	Gas oil	10,321	8,913
Texmar	12	6 00	12	9 49	12	18 40	12	18 40	American.	Charra S. S. Corp.	410.5	54.3	25.0	Olympia, Wash.	Baltimore, Md.	Lumber	7,297	5,567
Lagarto	12	22 40	12	19 25	13	13 30	13	15 50	British.	Pacific Steam Nav. Co.	385.0	52.0	26.0	Talcahuano, Chile	Hull, England	Nitrates, general	5,828	5,656
San Roberto	12	23 50	13	5 58	13	13 30	13	16 00	British.	Anglo-Mexican Pet. Co.	407.1	52.2	26.0	Los Angeles, Calif.	Lizards, Eng.	Gasoline	7,543	6,239
Toborg	11	6 45	13	6 39	13	14 35	13	14 35	Norwegian.	North-Saxon Pet. Co.	411.8	53.2	18.0	Los Angeles, Calif.	Curacao, D. W. I.	Ballast	6,250	4,494
Donau	13	4 20	13	7 11	13	14 20	14	00 05	German.	North German Lloyd.	320.8	63.6	28.0	Vancouver, B. C.	Hamburg, Germany	General	10,734	11,007
Paris City	13	5 30	13	8 05	13	16 40	13	19 10	British.	Reardon Smith Line.	411.6	63.6	28.0	Weston str., B. C.	Hambro, Germany	General	8,450	6,673
Zrinski	13	6 20	13	8 40	13	16 45	13	18 25	Yugoslav.	Barruzza & Co.	400.5	55.0	27.0	Talca, Chile	Azores ¹²	Nitrate of soda.	8,470	6,207
Castleboro	13	11 45	13	12 41	13	19 25	13	21 10	American.	Charles Nelson & Co.	370.0	53.2	22.0	San Francisco, Cal.	New York, N. Y.	Lumber, general	3,300	3,872
Santa Rita	13	11 00	13	14 51	13	19 20	14	2 08	Swedish.	Grace Line	361.1	72.2	34.4	Talcahuano, Chile	New York, N. Y.	General	3,706	6,254
Streakland	13	11 00	13	16 14	13	19 20	14	13 20	Swedish.	Ore S. S. Corp.	361.1	72.2	34.4	Cruz Grande, Chile	Sparrows Pt., Md.	From ore.	22,146	15,424
Texas	13	16 25	13	17 18	14	14 15	14	14 15	American.	Hawaii-Hawaiian Line.	471.0	57.2	30.0	Portland, Ore.	Boston, Mass.	Lumber, general	9,819	9,154
Virginia	13	17 10	14	6 14	14	13 50	14	14 35	American.	Panama-Pacific Line.	586.4	80.3	32.0	San Francisco, Cal.	New York, N. Y.	General	8,886	25,254
Lake Bonbow	13	18 40	14	6 41	14	15 30	14	15 30	American.	Ford Motor Co.	250.5	45.8	15.0	Newport, Ore.	Philadelphia, Pa.	Lumber	1,952	2,676
Axel Johnson	13	23 30	14	7 00	14	15 10	15	1 10	Swedish.	Johnson Line	352.0	52.6	25.0	Vancouver, B. C.	Stockholm, Sweden	General	5,560	6,642
Cities Service	14	2 00	14	7 45	14	16 50	14	16 50	American.	Cities Service Transp. Co.	468.3	62.7	30.5	Los Angeles, Calif.	New York, N. Y.	Gas oil	14,850	9,808
Petrol	14	6 00	14	8 09	14	16 10	15	1 10	French.	French Line	470.3	61.2	25.0	Vancouver, B. C.	Le Havre, France.	General	6,350	10,476
Wyoming	14	6 00	14	12 53	14	21 30	14	21 30	British.	Superior Oil Co., Ltd.	510.2	63.2	29.0	Talara, Peru	Halifax, N. S.	Crude oil	15,792	11,575
Victrolite	14	12 05	14	12 53	14	21 30	14	21 30	American.	Standard Transp. Co.	468.3	62.7	28.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	13,571	9,841
Yankee Arrow	14	13 30	14	14 14	14	21 55	14	21 55	American.	Dixon S. S. Corp.	410.3	64.0	26.0	Seattle, Wash.	Norfolk, Va.	Lumber, general	7,500	.....
Pacific Spruce	14	14 30	14	15 09	14	22 35	14	22 35	American.	.....	.....	.....	.....	.....	.....	.....	.....	.....
Benjamin	14	14 30	14	15 09	14	22 35	14	22 35	American.	.....	.....	.....	.....	.....	.....	.....	.....	.....
Franklin	14	16 40	14	20 05	15	11 10	15	15 20	Norwegian.	Fred Olsen & Co.	452.0	59.5	27.3	Vancouver, B. C.	Oslo, Norway	Wheat, general	8,153	9,081
Illinois	15	2 00	15	6 02	15	14 00	15	14 00	German.	The Texas Co.	416.8	56.1	25.0	Pt. San Luis, Calif.	Pt. Arthur, Texas.	Gasoline	7,473	6,945
Sachsen	15	1 00	15	6 54	15	15 35	15	22 55	German.	Hamburg-American Line	489.0	58.3	27.0	Valparaiso, Chile	Hamburg, Germany	General	9,714	9,624
Robert	15	1 00	15	6 54	15	15 35	15	22 55	German.	Hamburg-American Line	489.0	58.3	27.0	Valparaiso, Chile	Hamburg, Germany	General	9,714	9,624
Lukenbach	15	3 01	15	7 58	15	16 30	15	16 30	American.	Lukenbach Line	445.0	58.0	29.0	Portland, Ore.	Boston, Mass.	Lumber, general	9,630	8,695
Ryuyo Maru	15	5 45	15	8 26	15	17 40	15	18 35	Japanese.	Nippon Kisen Goshi K.	400.5	53.7	28.0	Vancouver, B. C.	Hull, England	Wheat, general	8,450	7,018
San Gabriel	15	9 00	15	9 43	15	18 05	15	18 00	American.	Pacific-Atlantic S. S. Co.	386.3	52.2	25.0	Seattle, Wash.	Baltimore, Md.	Wheat, lumber	6,000	5,719
Bisaya	15	3 30	15	11 10	15	18 45	15	18 45	German.	Atlantic Tank Rhetel	412.6	55.1	25.0	Los Angeles, Calif.	Avonmouth, Eng.	Gasoline	8,413	.....
Sunni	15	11 00	15	11 48	15	20 10	15	20 10	American.	Sun Oil Co.	480.6	66.0	29.0	Los Angeles, Calif.	Chester, Pa.	Gasoline	13,634	9,619
Hollywood	15	11 30	15	12 44	15	20 20	15	20 20	American.	McCormick S. S. Co.	410.0	54.3	25.3	Powell River, B. C.	Buenos Aires, Arg.	Lumber, general	6,452	6,584
S-14	15	11 30	15	12 44	15	20 20	15	20 20	American.	McCormick S. S. Co.	410.0	54.3	25.3	Powell River, B. C.	Buenos Aires, Arg.	Lumber, general	6,452	6,584
Drehtidijk	16	00 20	16	6 55	16	14 12	16	22 15	British.	V. S. Navy	231.0	30.0	.....	Balboa, C. Z.	Cristobal, C. Z.	General	9,302	10,703
Ionic	16	00 20	16	7 09	16	14 52	16	23 50	British.	V. S. Pacific Coast Line	301.3	62.0	29.2	Vancouver, B. C.	Rotterdam, Hol'd	General	4,534	12,872
Arana	16	6 50	16	10 33	16	18 56	16	23 50	British.	Star, Shvill & Allison	500.3	63.3	26.0	Wellington, N. Z.	London, England	Frozen, general	4,534	12,872
San Simon	16	18 50	17	6 42	17	13 45	17	13 45	British.	Pacific Steam Nav. Co.	303.0	43.0	14.0	Callao, Peru	New York, N. Y.	Lumber	436	2,851
Benwyvis	16	20 45	17	6 42	17	13 45	17	13 45	British.	Quaker Line	410.5	54.3	24.1	Portland, Ore.	Philadelphia, Pa.	Lumber, general	6,092	6,573
.....	16	20 45	17	6 47	17	14 20	17	14 20	British.	Can. Amer. Ship. Co.	429.0	53.0	23.4	Kamohatska, Japan.	London, England	Lumber	7,000	6,591

¹² Canned salmon and lumber

¹³ Coffee, cocoa, hides, and wool.

¹⁴ Lumber, general, and copper.

¹⁵ For orders.

¹⁶ Motor ship.

¹⁷ Submarine.

¹⁸ Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CHRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
October 15.....	No. 9137 ²¹	Pan American Airways.....	Miami via wayports.	October 15.....	Amelia I. ²²	A. Tagaropolos.....	Colon, Rep. of Panama.
October 15.....	No. 9088 ²¹	Pan American Airways.....	San Salvador and waypts.	October 15.....	Venezuela.....	Royal Netherlands S. S. Co.....	Fort Limon, Costa Rica.
October 15.....	Anachuca ²¹	United Fruit Co.....	Colon, Rep. of Panama.	October 15.....	No. 144-M ²¹	Pan American Airways.....	La Guayra and wayports.
October 15.....	Amelia I. ²²	A. Tagaropolos.....	Colon, Rep. of Panama.	October 16.....	Irona.....	United Fruit Co.....	Fort Limon, Costa Rica.
October 15.....	Inspaquima ²³	Colombian S. S. Line.....	New York via wayports.	October 16.....	Metapan.....	United Fruit Co.....	New York via wayports.
October 16.....	Pasajero ²³	Gough Brothers.....	Belize and wayports.	October 17.....	Anachuca ²¹	Pan American Airways.....	San Salvador and waypts.
October 16.....	Ampala.....	Standard Fruit & S. S. Co.....	New Orleans and Habana.	October 17.....	No. 9089 ²¹	Scotia Airplane Co.....	Barranquilla and waypts.
October 17.....	Venezuela.....	Royal Netherlands S. S. Co.....	Fort Limon, Costa Rica.	October 17.....	Darien C-35 ²¹	Colombian S. S. Line.....	New York via wayports.
October 17.....	Inspaquima ²³	United Fruit Co.....	Fort Limon, Costa Rica.	October 17.....	Bridge-town.....	A. Tagaropolos.....	Colon, Rep. of Panama.
October 18.....	Irona.....	United Fruit Co.....	Fort Limon, Costa Rica.	October 18.....	Inspaquima ²³	Colombian S. S. Line.....	New Orleans and waypts.
October 18.....	Belay.....	Hamburg-American Line.....	Tampico and wayports.	October 18.....	Anapala.....	Standard Fruit & S. S. Co.....	New Orleans and waypts.
October 18.....	No. 144-M ²¹	Aluminum Line.....	New Orleans, La.	October 18.....	Venezuela.....	Royal Netherlands S. S. Co.....	Amsterdam and wayports.
October 18.....	No. 9070 ²¹	Pan American Airways.....	La Guayra and wayports.	October 18.....	Rugia.....	Hamburg-American Line.....	Hambug and wayports.
October 18.....	No. 142-M ²¹	Pan American Airways.....	San Salvador and waypts.	October 18.....	Pasajero ²³	Gough Brothers.....	Fort Limon, Costa Rica.
October 18.....	No. 945-M ²¹	Pan American-Grace Airways.....	Miami via wayports.	October 18.....	Belay.....	Aluminum Line.....	Puerto Cabello, Venez.
October 18.....	Espepe Fuego ²³	Connelly & Papi.....	Talara via wayports.	.....	.....	.....	.....
October 18.....	Inspaquima ²³	A. Tagaropolos.....	Colon, Rep. of Panama.	.....	.....	.....	.....

²¹ Air mail carrier. ²² Motor boat. ²³ Motor schooner.

PORT OF BALBOA.

October 14.....	Ginyo Maru.....	Nippon Yusen Kaisha.....	Hongkong, China.	October 14.....	Ginyo Maru.....	Nippon Yusen Kaisha.....	Valparaiso, Chile.
October 16.....	City of Panama ²⁴	Panama Mail S. S. Co.....	San Francisco Calif.	October 16.....	City of Panama ²⁴	Panama Mail S. S. Co.....	Buenaventura, Colombia.
October 17.....	La Union ²⁵	A. Valdez.....	Panama Bay, R. P.	October 16.....	A. Valdez.....	Panama Bay, R. P.	Panama Bay, R. P.
October 17.....	Des Hermanos ²⁵	A. Valdez.....	Panama Bay, R. P.	October 17.....	Des Hermanos ²⁵	A. Valdez.....	Panama Bay, R. P.
October 17.....	La Nina ²⁵	A. Valdez.....	Panama Bay, R. P.	October 17.....	La Nina ²⁵	A. Valdez.....	Panama Bay, R. P.
October 17.....	Samba ²⁵	Hans Elliot.....	Panama Bay, R. P.	October 17.....	Samba ²⁵	Hans Elliot.....	Panama Bay, R. P.
October 17.....	Real ²⁵	Hans Elliot.....	Panama Bay, R. P.	October 17.....	Real ²⁵	Hans Elliot.....	Panama Bay, R. P.
October 17.....	Nueva Panama ²⁴	Hans Elliot.....	Panama Bay, R. P.	October 18.....	Nueva Panama ²⁴	Hans Elliot.....	Panama Bay, R. P.

²⁴ Motor ship. ²⁵ Motor schooner.

* Other than ships passing through the Canal.

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CANAL WORK IN SEPTEMBER, 1930.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of September, 1930.

BALBOA HEIGHTS, C. Z., October 18, 1930.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of September, 1930:

NUMBER OF TRANSITS.

During the month 458 commercial vessels and 15 small nonseagoing launches measuring under 20 tons transited the Canal. In addition to these there were 26 vessels belonging to the United States Government and 1 transit of a vessel solely for repairs, on which no tolls were collected, making a total of 500 transits for the month, or a daily average of 16.67.

Tolls on the commercial vessels amounted to \$2,057,103.58, and on the launches to \$173.67, a total of \$2,057,277.25, or a daily average on all traffic of \$68,575.91.

Commercial traffic for the past month as compared with August, 1930, shows a decrease of 7 transits and \$23,126.84 in tolls although the daily averages of transits and tolls were slightly higher in September. As compared with September, 1929, commercial traffic for the past month shows a decrease of 65 transits and \$144,685.82 in tolls. Traffic in the first 9 months of the current calendar year has fallen off to the extent of 425 transits and \$986,789.64 in tolls, a decrease of 8.8 per cent and 4.8 per cent, respectively.

The total numbers of craft of all kinds transiting the Canal during the month of September in the two preceding years and in 1930 are shown in the following tabulation:

	September, 1928.	September, 1929.	September, 1930.
Commercial vessels.....	487	523	458
Launches (under 20 tons).....	11	11	15
Noncommercial vessels:			
United States Government.....	17	33	26
Panamanian Government.....	2	3	.....
Colombian Government.....	1	.....	.....
Vessels for repairs.....	3	.....	1
Total.....	521	570	500

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, barges, tugs, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun.....	9	5	14
Pedro Miguel.....	13	12	25
Miraflores.....	13	12	25
Total.....	35	29	64

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the calendar year to the end of September in 1929 and 1930:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929.	1930.	1929.	1930.	1929.	1930.	1929.	1930.
January...	603	531	2,771,280	2,601,628	2,858,835	2,611,632	\$2,502,815.12	\$2,360,211.24
February...	522	491	2,428,530	2,369,255	2,550,498	2,377,900	2,211,961.20	2,131,386.12
March.....	536	515	2,567,961	2,505,899	2,743,768	2,558,238	2,343,865.55	2,260,002.36
April.....	540	489	2,488,176	2,479,096	2,719,668	2,456,782	2,281,087.27	2,232,763.00
May.....	524	479	2,496,905	2,418,633	2,536,839	2,261,616	2,296,546.57	2,162,898.60
June.....	503	478	2,352,431	2,358,237	2,424,002	2,147,181	2,127,805.97	2,100,994.53
July.....	527	458	2,468,280	2,438,895	2,598,163	2,402,047	2,259,582.37	2,180,511.82
August....	541	465	2,558,739	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
September.	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.58
Total....	4,819	4,394	22,557,563	21,831,600	23,545,285	21,023,447	20,532,891.31	19,566,101.67

* Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these Governments, and vessels transiting solely for repairs, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for September in the years 1928, 1929, and 1930, and comparison with the monthly averages for the fiscal year 1930:

	September, 1928.	September, 1929.	September, 1930.	Average per month for fiscal year 1930.
Number of vessels.....	487	523	458	515
Panama Canal net tonnage.....	2,295,053	2,425,261	2,314,424	2,498,385
United States net tonnage.....	1,771,095	1,852,540	1,738,958	1,899,255
Registered gross tonnage.....	2,909,454	3,058,032	2,870,592	3,119,221
Registered net tonnage.....	1,777,124	1,861,671	1,746,818	1,899,802
Tolls.....	\$2,111,230.56	\$2,201,789.40	\$2,057,103.58	\$2,256,407.50
Tons of cargo carried.....	2,313,011	2,432,783	2,059,582	2,502,519

The average daily number of transits, tonnage, tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for fiscal year 1930.
	September, 1928.	September, 1929.	September, 1930.	
Number of transits.....	16.23	17.43	15.26	16.95
Panama Canal net tonnage.....	76,502	80,842	77,147	82,139
Tolls.....	\$70,374.35	\$73,392.98	\$68,570.12	\$74,183.26
Tons of cargo carried.....	77,101	81,093	68,653	82,275

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of September in 1928, 1929, and 1930 are shown in the following tabulation.

	Average per vessel.		
	Sept., 1928.	Sept., 1929.	Sept., 1930.
Panama Canal net tonnage.....	4,712	4,637	5,053
United States net tonnage.....	3,636	3,542	3,797
Registered gross tonnage.....	5,974	5,847	6,268
Registered net tonnage.....	3,650	3,560	3,814
Tolls.....	\$4,335.18	\$4,209.92	\$4,491.49
Tons of cargo (including vessels in ballast).....	4,750	4,652	4,497
Tons of cargo (laden vessels only).....	5,683	5,658	5,420

NATIONALITY OF VESSELS.

Sixteen nationalities were represented in the commercial traffic passing through the Canal in September, 1930. Vessels of United States registry, with 208, led in the number of transits, while those flying the British flag with 111, were second. Vessels of these two nationalities made up 69 per cent of the total transits for the month. Norway and Germany were next with 34 and 30, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo carried through the Canal during the month of September, 1930, was 2,059,582 tons. Cargo from the Atlantic to the Pacific aggregated 595,589 tons, as compared with 679,407 in August, 1930, and 746,289 tons in September, 1929. From the Pacific to the Atlantic there were 1,463,993 tons, as compared with 1,469,062 tons in August, 1930, and 1,686,494 tons in September, 1929.

From the Atlantic to the Pacific various manufactured goods, totaling 186,679 tons, constituted the heaviest item of cargo, followed by phosphates with 39,537 tons, mineral oils with 34,912 tons, and cotton with 28,936 tons. There was a decrease of 150,700 tons of cargo, or 20.2 per cent, in this direction as compared with September, 1929, due to lessened shipments of many of the important commodities.

From the Pacific to the Atlantic mineral oil shipments totaling 462,213 tons, constituted the heaviest item, followed by lumber with 231,141 tons, wheat with 117,500 tons, miscellaneous canned goods with 104,427 tons, sugar with 81,752 tons, ores (principally iron) with 68,542 tons, and nitrates with 63,164 tons. There was a decrease of 222,501 tons, or 13.2 per cent, in this direction, as compared with September, 1929. Nitrate shipments declined 152,951 tons, or 70 per cent; ores, 91,308 tons, or 58 per cent; lumber, 47,500 tons, or 17 per cent. Mineral oils and wheat increased, respectively, 31,991 tons, or 7 per cent, and 31,844 tons, or 37 per cent, in comparison with the same month in the preceding year.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per tons for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.923 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.722 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of September, 1930, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$5,710.00	\$4,976.00		\$734.00
British.....	496,871.81	529,896.60	\$33,024.79	
Chilean.....	8,665.00	9,410.00	745.00	
Colombian.....	1,470.40	1,311.00		159.40
Danish.....	33,240.00	34,792.00	1,552.00	
Danzig.....	21,537.54	18,689.20		2,848.34
Dutch.....	29,597.50	35,912.00	6,314.50	
French.....	51,469.08	53,878.40	2,409.32	
German.....	99,795.80	113,712.00	13,916.20	
Italian.....	32,200.04	35,902.20	3,702.16	
Japanese.....	83,461.10	80,120.00		3,341.10
Norwegian.....	133,488.79	142,287.20	8,798.41	
Panamanian.....	10,078.45	14,028.00	3,949.55	
Swedish.....	29,565.90	27,488.20		2,077.70
United States.....	1,010,993.14	1,047,968.60	36,975.46	
Yugoslav.....	8,959.03	7,163.40		1,795.63
Total.....	2,057,103.58	2,157,534.80	111,387.39	10,956.17
Net increase for all traffic.....			100,431.22	

The increase on vessels of United registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows.

United States intercoastal trade.....	\$28,793.55
United States foreign trade.....	8,606.39
United States—Canal Zone trade.....	424.48
Total.....	36,975.46

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in September, 1930, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....	1.92		1.92
British.....	.65	1.19	.92
Chilean.....	.33	.47	.40
Colombian.....	1.39	.65	.89
Danish.....	.53	1.15	1.01
Danzig.....		1.79	1.79
Dutch.....	.38	1.42	.66
French.....	.33	1.27	.83
German.....	.70	1.39	1.08
Italian.....	.27	.99	.66
Japanese.....	1.12	1.32	1.21
Norwegian.....	1.21	1.63	1.54
Panamanian.....	.57	.77	.67
Swedish.....	1.27	4.85	2.42
United States.....	.73	1.35	1.10
Yugoslav.....		2.63	2.63
Averages, September, 1930.....	.71	1.53	1.07
Averages, September, 1929.....	.83	1.48	1.21
Averages, September, 1928.....	.85	1.49	1.20

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of September is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	5	25,847	\$24,410.29	43	246,080	\$254,627.50
Ballast.....	45	257,390	185,502.48	1	3,892	2,802.24
General cargo ships:						
Laden.....	159	813,833	725,171.20	174	836,278	769,633.40
Ballast.....	28	130,278	94,350.86	2	426	312.36
Noncargo-carrying ships:						
Lighthouse tender.....	1	400	293.25			
Total.....	238	1,227,748	1,029,728.08	220	1,086,676	1,027,375.50
Method of propulsion:						
Steam.....	173	856,975	739,857.97	153	757,763	720,505.99
Motor.....	65	370,773	289,870.11	65	328,807	306,742.31
Nonpropelled.....				2	106	127.20
Total.....	238	1,227,748	1,029,728.08	220	1,086,676	1,027,375.50

Of the 326 steam-driven vessels, 239 were oil burning, 85 coal burning, and 2 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of September, 1930. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Cruisers.....	1	³ 3,200	\$1,600.00			
Minesweepers.....	1	² 950	475.00	1	² 950	\$475.00
Submarines.....	3	² 2,606	1,303.00	4	² 3,482	1,741.00
Survey ships.....	1	² 2,600	1,300.00	1	² 2,600	1,300.00
Tankers.....	1	² 6,258	4,693.50			
Tugs.....	2	² 2,000	1,000.00	2	² 2,000	1,000.00
U. S. Army vessels:						
Mineplanters.....	1	² 1,208	604.00	1	² 1,208	604.00
Transports.....	1	² 3,908	4,885.00	3	² 11,724	14,655.00
Tugs.....	1	² 46	34.50	1	² 46	34.50
U. S. Department of Commerce vessels:						
Lightships.....				1	² 1,000	500.00
Total, U. S. Government.....	12		15,895.00	14		20,309.50
Vessels for repairs:						
Tankers.....	1	² 1,645	1,233.75			
Grand total.....	13		17,128.75	14		20,309.50

¹ Indicates displacement tonnage. ² Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of September, 1930, carried cargo as follows: Atlantic to Pacific, 356 tons; Pacific to Atlantic, 438 tons; total, 794 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of September, 1930. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	13	150	\$168.12
Pacific to Atlantic.....	2	5	5.55
Total.....	15	155	173.67

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of September, 1930, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	56,159	19,688	75,847
Local cargo shipped..... tons..	7,594	1,320	8,914
Transit cargo arriving..... tons..	2,035,504	2,062,442	4,097,946
Transit cargo clearing..... tons..	2,032,069	2,037,636	4,069,705
Cargo received for transshipment..... tons..	21,557	1,953	23,510
Cargo transhipped..... tons..	20,412	1,520	21,932
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	106	33	139
Number of releases issued.....	688	193	881
Tons received.....	1,407	620	2,027
Tons withdrawn.....	1,659	643	2,302
Packages received.....	6,704	3,812	10,516
Packages withdrawn.....	6,546	3,886	10,432
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Co.....	37		37
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons..	15,321		15,321
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	77	6	83
U. S. Army, including vessels..... tons..	41	12	53
Individuals and companies..... tons..	203		203
Transferred to Army..... tons..	18		18
Total sales and issues..... tons..	15,660	18	15,678

	Cristobal.	Balboa.	Total.
Coal on hand, September 1, 1930..... tons	93,345		93,345
Coal on hand, October 1, 1930..... tons	77,685		77,685
Coal received from Army..... tons		18	18
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls	8,109.94	9,663.07	17,743.01
U. S. Army and Navy..... bbls	485.30	115.45	600.75
Individuals and companies..... bbls		146.43	146.43
Total sales and issues..... bbls	8,595.24	9,894.95	18,490.19
Gasoline and kerosene pumped for The Panama Canal..... bbls	57,314.54	79,082.85	136,397.39
Diesel oil issued and sold during September, 1930..... bbls		2,586.08	2,586.08
Diesel oil on hand, October 1, 1930..... bbls	1,082.50	12,018.89	13,101.39
Miscellaneous transfers..... bbls	174.83	602.32	777.20
Gasoline and kerosene pumped for The Panama Canal..... bbls	1,866.71	4,134.43	6,001.14
Gasoline pumped for individuals and companies..... bbls	750.84	5,957.26	6,708.10
Oil pumped for individuals and companies:			
Receipts..... bbls	269,443.97	80,574.45	350,018.42
Issues..... bbls	259,874.96	131,277.63	441,152.64
Oil pumped for U. S. Navy..... bbls	1,024.00	1,941.00	2,965.00
Total fuel oil, gasoline, and kerosene handled..... bbls	541,730.60	286,968.17	828,698.77
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	20	1	21
Remeasured for Panama Canal net tonnage.....	24	1	25
Panama Canal net tonnage corrected.....	2	6	8
U. S. equivalent tonnage corrected.....	9	17	26
Services of harbor equipment:			
Tugs, total operating hours.....	310½	186½	497½
Launches, total operating hours.....	1,238½	1,327½	2,566
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$10,415.00	\$6,343.75	\$16,758.75
Pilotage.....	17,013.00	7,490.00	24,503.00
Seamen.....	11,212.00	10,176.00	21,388.00
Launch service.....	1,771.50	2,861.00	4,632.50
Wharfage.....	15,212.34	5,365.98	20,578.32
Ships measured.....		5.00	5.00
Miscellaneous.....	232.15	322.00	554.15
Ships repaired at Panama Canal shops:			
Commercial.....	43	6	49
U. S. Army and Navy.....	7	5	12
Panama Canal equipment.....	2	11	13
Total.....	52	22	74
Vessels dry docked:			
Commercial.....	6	1	7
U. S. Army and Navy.....	1	2	3
Panama Canal equipment.....		4	4
Total.....	7	7	14
Clearances issued.....	270	246	516
Bills of health issued.....	272	248	520

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal.....	515	3,228,367	1,947,922	418	2,596,576	1,580,193
Vessels entering port but not transiting Canal.....	65	338,799	201,521	8	34,078	20,523
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	118	808,325	494,238	98	646,822	390,350
<i>Ships clearing.</i>						
All vessels, including those transiting Canal.....	510	3,192,902	1,928,687	414	2,559,192	1,557,945
Vessels clearing port but not transiting Canal.....	61	309,458	186,013	7	29,330	17,598
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	117	802,201	490,511	97	631,885	381,358

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports	1,329	876	2,205	118	264	382
From Pacific ports	168	113	281	344	256	600
Total disembarking	1,497	989	2,486	462	520	982
Embarking:						
For Atlantic ports	1,057	865	1,922	209	381	590
For Pacific ports	170	172	342	204	187	391
Total embarking	1,227	1,037	2,264	413	568	981
Remaining on board:						
From Atlantic to Pacific ports	1,269	1,446	2,715	1,473	1,785	3,258
From Pacific to Atlantic ports	1,529	1,192	2,731	1,485	1,511	2,996
From Atlantic to Atlantic ports	313	76	389			
From Pacific to Pacific ports				6	150	156
Total remaining on board	3,111	2,714	5,835	2,964	3,446	6,410
Total arriving	4,618	3,703	8,321	3,426	3,966	7,392
Total departing	4,348	3,751	8,099	3,377	4,014	7,391

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific	238	57	23.9
Pacific to Atlantic	220	60	27.3
Total	458	117	25.5

In addition to the aforesaid, 50 passenger-carrying vessels called at the port of Cristobal and 6 at Balboa without transiting the Canal, making a total of 173 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of September, 1930, 39 commercial airplanes entered and 36 cleared at the port of Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of September, 1930:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels	\$2,220.93	\$11,915.40	\$21,647.90	\$123.62	\$6,150.86	\$42,058.71
Government vessels	97.80	545.25	3,494.98	58.15	588.05	4,784.23
P. R. R. vessels	3.60	191.14	744.78	889.00	186.32	2,014.84
Total sales, September, 1930.	2,322.33	12,651.79	25,887.66	1,070.77	6,925.23	48,857.78
Total sales, September, 1929.	3,172.86	12,942.67	47,083.21	1,067.66	7,533.48	71,799.88
Total sales, September, 1928.	2,621.47	11,753.13	34,872.43	991.68	6,872.80	57,111.51
Sales at Balboa to:						
Commercial vessels	465.52	918.29	19,145.20	629.01	9,871.38	22,029.40
Government vessels	158.40	914.26	9,250.31	523.01	788.92	11,634.90
P. R. R. vessels				57.35		57.35
Total sales, September, 1930.	623.92	1,832.55	19,395.51	1,209.37	10,660.30	33,721.65
Total sales, September, 1929.	1,189.90	11,298.28	22,114.96	629.91	4,782.86	40,015.91
Total sales, September, 1928.	1,518.80	11,893.34	37,534.14	1,342.33	5,917.72	58,206.33

The aggregate sales to Government vessels during the month were \$16,419.13; to Panama Railroad vessels, \$2,072.19; and to other commercial vessels, \$64,088.11, making the total sales to all vessels, \$82,579.43. The figures shown are subject to minor changes on final audit.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of September, 1930, as compared with the corresponding month in 1928 and 1929:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. †			Sept., 1928.	Sept., 1929.	Sept., 1930.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	208	230	438	11	8	19	475	507	457
Pedro Miguel.....	213	236	449	14	10	24	490	535	473
Miraflores.....	213	234	447	12	12	24	493	530	471
	Number of vessels put through locks.								
Gatun.....	218	238	456	38	36	74	543	583	530
Pedro Miguel.....	221	238	459	34	29	63	570	622	522
Miraflores.....	219	238	457	33	29	62	577	619	519

† Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	35	34	34
Panama Canal equipment.....	14	25	25
Vessels for repairs.....	1	1	1
Launches.....	24	3	2

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in September, 1930, as compared with the preceding month and the corresponding month in 1929:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	1,867,290,000	1,476,310,000	1,395,470,000
Maintenance.....	5,710,000		
Leakage.....	40,000,000	13,500,000	20,000,000
Total, September, 1930.....	1,913,000,000	1,489,810,000	1,415,470,000
Total, August, 1930.....	1,924,880,000	1,488,200,000	1,451,080,000
Total, September, 1929.....	2,073,300,000	1,700,940,000	1,612,780,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of September, 1930, are shown in comparative form, in the following tabulation:

	September.		September—Years of record.		
	1929.	1930.	Maximum.	Minimum.	Mean.
Discharge of Chagres River at Alhajuela.....	<i>C. f. s.</i> 2,389	<i>C. f. s.</i> 2,696	<i>C. f. s.</i> 5,022	<i>C. f. s.</i> 1,722	<i>C. f. s.</i> 3,169
Maximum momentary discharge for the month.....	9,375	36,180	36,180		
Gatun Lake watershed, total yield.....	6,548	6,507	11,946	6,507	8,831
Gatun Lake watershed, net yield.....	5,945	5,974	11,238	5,945	8,252
Draft on Gatun Lake for lockages and power.....	2,917	2,780	2,917	1,322	2,321

¹ September 25, 1930.

² 1914 excluded.

³ Full load.

The monthly mean discharge of the Chagres River at Alhajuela for September, 1930, was 2,696 c. f. s., which is 15 per cent below the 29-year average of 3,169 c. f. s. The maximum monthly mean discharge on record for September is 5,022 c. f. s. in 1927, and the minimum is 1,722 c. f. s. in 1905.

Gatun Lake varied in elevation during September from a minimum of 85.04 feet on the 1st, to a maximum of 86.16 feet on the 29th, and averaged 85.60 feet. The elevation at midnight on August 31 was 85.08 feet and at midnight on September 30, 86.02 feet, showing a net rise during the month of 0.94 foot. The total yield of Gatun Lake watershed was 6,507 c. f. s., which is 26 per cent below the 17-year September average of 8,831 c. f. s., and the lowest during the period of record for September. The maximum total yield for September is 11,946 c. f. s. in 1917.

Miraflores Lake varied between elevation 53.05 feet on the 2d, and 54.45 feet on the 30th. The mean elevation for the month was 53.77 feet. At midnight on the 30th the elevation was 53.86 feet.

SEISMOLOGY.

Two small seismic disturbances were recorded during the month, on the 26th and 27th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 4,977,600 kilowatt hours, and the computed water consumption was 3,853,339,970 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 2,900 kilowatt hours, and the fuel oil consumption was 14.03 barrels. This station was operated only for peak-load service during the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 31 vessels during the month. There were 422 work orders issued during the month, as compared with 402 issued during the previous month.

MECHANICAL DIVISION.

During the month of September, 1930, miscellaneous repairs were made on 52 vessels at Cristobal and 22 at Balboa. Seven vessels were dry-docked at Cristobal and 7 at Balboa. The general overhaul of the United States Army tug *General G. W. Getty* was completed during the month. Lightship *No. 114* of the Department of Commerce was at the Balboa shops for repairs to engine. The United States Navy tug *Sciota* entered dry dock for general overhaul and work was carried forward. The repairs and alterations to the United States Navy's submarine *S-10* neared completion at the end of the month.

MUNICIPAL ENGINEERING DIVISION.

On the Thatcher Highway under construction from the Canal to the Zone boundary near Arraijan 8,100 feet were cleared, 15,886 cubic yards of grading were performed, and 6 concrete culverts were constructed. The retaining walls were 30 per cent complete at the end of the month.

In connection with the improvements around the Naval Air Station, at Coco Solo, 685 cubic yards of earth were excavated and 4,000 square yards graded.

Work on several improvement projects in the cities of Colon and Panama, and in the Canal Zone, was carried on.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 721,561,750 gallons.

DREDGING DIVISION.

The general movement along the waterfront of West Culebra slide continued throughout the month with an average movement of one foot toward the Canal between stations 1770-00 and 1794-00 W., and 0.3 foot southward between stations 1772-00 and 1775-00 W. The reference points on this slide showed a small movement. West Lirio slide was active during September, a dredge working 21 days in connection therewith between stations 1732-00 and 1744-00 W., excavating 73,000 cubic yards. There was a slight surface movement at Southwest La Pita slide during the month. There was no interference to shipping on account of slides during the month.

A suction dredge worked 17 days in Folks River borrow pit, excavating 40,500 cubic yards for the France Field fill, and 18,000 cubic yards of sand, coral and silt, for a stock pile, completing work on these projects.

The total excavation during September, 1930, was 842,590 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
	<i>Cubic yds.</i>	<i>Cubic yds.</i>	<i>Cubic yds.</i>
Work excavation:			
Atlantic entrance—			
Maintenance.....	91,000	.....	91,000
Gaillard Cut—			
West Lirio slide.....	15,300	57,700	73,000
Maintenance.....	5,750	.....	5,750
Project No. 3.....	3,200	18,100	21,300
Pacific entrance—			
Project No. 1.....	250,000	48,800	298,800
Maintenance.....	273,150	18,000	291,150
Plant excavation:			
France Field.....	40,500	.....	40,500
Dredging sand at Chame.....	3,090	.....	3,090
France Field stock pile.....	18,000	.....	18,000
Total.....	699,990	142,600	842,590

The ferry crossing at the north end of Pedro Miguel locks operated 30 days during the month. One thousand three hundred and twenty trips were made, and 174 Panama Canal, 50 United States Army, and 5,053 other vehicles, a total of 5,277, were ferried across the Canal.

MADDEN DAM PROJECT.

The geological investigations were carried on intensively. Two hundred ninety-five linear feet of tunnelling along open seams were completed during the month. Tunnel work is being carried on in two 8-hour shifts. One hundred and nineteen linear feet of test pits for earth and rock investigations were completed during the month. Geological mapping was carried on. Sampling for earth dam material was completed. Forty-one samples were sent to the laboratory for analysis. Five hundred and six linear feet of drilling with diamond and shot drills was completed during the month.

Surveys for transmission line from Summit to Madden Dam were completed from Madden Dam to the Canal Zone boundary, and were started from the boundary to Summit. Profiles were plotted and towers located for that part of the line which had been surveyed. Drawings for the structural steel towers were made and specifications prepared for purchase. Compression tests were made at Miraflores laboratory of stone from 6-inch shot drill cores and several 2-inch diamond drill cores. Permeability tests were made from 2-inch cores. Quantitative test for clay in stone at dam site was partly completed. Permeability tests of concrete were reported. Observations of water table, silt analysis, and stream gauging were continued. The flood warning stations at Salamanca on Rio Pequeni and at Rio Indio on the Chagres were put in operation on September 9th for the remainder of the flood season. Studies were continued for the main dam, power plant, spillway, transmission line, substation and switching station at Summit. Work was performed on base maps for dam site and camp site.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on September 30, 1930, was 23,328, composed of 7,945 Americans, 2,841 of whom were men, 2,406 women, and 2,698 children; 184 Europeans, 82 of whom were men, 30 women, and 72 children; and 15,199 West Indians, 4,212 of whom were men, 2,718 women, and 8,269 children. The total number of persons in quarters on September 30, 1929, was 22,016.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of September 17, 1930, with a comparison of the working force for the preceding month and for September, 1929:

	Total employees.		As of September 17, 1930.		
	September, 1929.	August, 1930.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office	104	127	56	63	119
Electrical	311	337	162	201	363
Municipal Engineering	857	1,105	98	1,122	1,220
Lock operation	957	942	241	715	956
Dredging	1,251	1,168	193	938	1,136
Madden Project	796	288	24	229	253
Mechanical	1,452	1,402	496	899	1,395
Marine	908	766	202	580	782
Fortifications	297	178	20	229	249
Total	6,933	6,313	1,497	4,976	6,473
Supply Department:					
Quartermaster	2,312	2,086	213	1,693	1,906
Commissary	1,519	1,579	240	1,353	1,593
Cattle Industry—Plantations	117	94	2	95	97
Hotel Tivoli	113	112	8	108	116
Hotel Washington	108	103	9	97	106
Transportation	290	329	77	248	325
Total	4,459	4,303	549	3,594	4,143
Accounting Department.					
Health Department	203	210	203	6	209
Executive Department	1,282	1,159	287	842	1,129
.....	835	861	525	332	857
Total	2,320	2,230	1,015	1,180	2,195

	Total employees.		As of September 17, 1930.		
	September, 1929.	August, 1930.	Gold.	Silver.	Total.
Panama Railroad Company:					
Superintendent.....	343	305	49	255	304
Transportation.....	190	189	67	122	189
Receiving and Forwarding Agency.....	1,783	1,306	82	1,061	1,143
Coaling Stations.....	292	279	43	225	268
Total.....	2,698	2,079	241	1,663	1,904
Grand total, September, 1929.....	16,320				
Grand total, August, 1930.....		14,925			
Grand total, September, 1930.....			3,302	11,413	14,715

Additions to the gold force on the Isthmus were as follows: Employed in the United States, 3; reemployed in the United States, 2; employed on the Isthmus, 15; re-employed on the Isthmus, 17; total, 37. Separations from the gold force totaled 44, as follows: Resigned, 25, discharged, 10; retired, 9. At the end of the month there were on file 675 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 182 deaths occurred during the month of September, 1930, among the population of the Canal Zone, and the cities of Panama and Colon (population, 143,636), which is equivalent to an annual death rate of 15.21 per 1,000 population. The leading causes of death were: Pneumonia (broncho and lobar), 30; tuberculosis (various organs), 24; organic diseases of the heart, 11; diarrhea and enteritis, 11; and cancer, 10. There were 9 deaths from apoplexy, 8 from nephritis, 6 from syphilis, and 2 from typhoid fever. There were 20 deaths among nonresidents. These are not included in the above statistics.

There were 349 live births and 15 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 30.41. Deaths among children under 1 year of age numbered 39, giving an infant mortality rate based on the number of live births reported, of 111.75.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during the month was 134, of whom 16 were employees (3 white and 13 colored), 15 were members of employees' families (3 white and 12 colored), 10 were Canal Zone agriculturists, 61 were other civilian nonemployees, and 32 were Army and Navy personnel. Of the 31 employees and members of employees' families, 20 were probably infected outside our sanitized areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There were no deaths from malaria among residents.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$367,731.77 of which \$346,094.29 was for the Department of Operation and Maintenance, and \$21,637.48 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material, amounted to \$35,624.07.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of August, 1930, as compared with August, 1929, with the figures for the first two months of the current fiscal year as compared with the same period in the fiscal year 1930.

It is impossible to submit figures for the month of September at the time of writing this report, since all charges, etc., involved in the accounting have not been completed.

	August, 1929.	August, 1930.	To end of August	
			Last year.	This year.
Tolls.....	\$2,327,477.01	\$2,080,327.92	\$4,587,058.88	\$4,259,708.44
Other receipts.....	351,922.88	334,223.70	717,931.31	675,917.01
Total transit revenues.....	2,679,399.89	2,414,551.62	5,304,990.19	4,935,625.45
Total transit expenses.....	1,080,911.94	1,132,943.84	2,178,848.46	2,211,603.93
Net transit revenues.....	1,598,487.95	1,281,607.78	3,126,141.73	2,724,021.52
Three per cent capital charge.....	620,655.94	625,683.92	1,240,761.32	1,251,367.84
Transit surplus.....	977,832.01	655,923.86	1,885,380.41	1,472,653.68
Business revenues.....	1,470,541.90	1,571,062.19	3,245,897.18	3,594,010.87
Business expenses.....	1,397,153.92	1,506,083.93	3,070,375.15	3,473,968.01
Net business revenues.....	73,387.98	64,978.26	175,522.03	120,042.86
Three per cent capital charge.....	61,608.90	64,968.36	123,128.49	129,936.72
Business surplus.....	11,779.08	9.90	52,393.54	9,893.86
Combined revenues.....	4,149,941.79	3,985,613.81	8,550,887.37	8,529,636.32
Combined expenses.....	2,478,065.86	2,639,027.77	5,249,223.61	5,685,571.94
Net revenues.....	1,671,875.93	1,346,586.04	3,301,663.76	2,844,064.38
Three per cent capital charge.....	682,264.84	690,652.28	1,363,889.81	1,381,304.56
Combined surplus.....	989,611.09	655,933.76	1,937,773.95	1,462,759.82

¹ Denotes deficit.

Respectfully,

H. BURGESS.
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending October 18, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Ancon.....	Panama R. R. S. S. Line.....	.....	October 12.....	.....	787
Ebro.....	Pacific Steam Navigation Co.....	.....	October 12.....	.....	95
Oroya.....	Pacific Steam Navigation Co.....	.....	October 12.....	(²)	.....
Champerico.....	Pacific Steam Navigation Co.....	.....	October 17.....	.....	672
Manizales.....	North German Lloyd.....	.....	October 18.....	.....	152
Tolca.....	United Fruit Co.....	October 12.....	October 12.....	.....	262
Cauca.....	United Fruit Co.....	October 12.....	October 12.....	.....	166
Donau.....	North German Lloyd.....	October 13.....	October 13.....	(¹)	273
Santa Rita.....	Grace Line.....	October 13.....	October 13.....	.....	196
Nora.....	Grace Line.....	October 13.....	October 14.....	.....	14,226
Sulairia.....	Donaldson Brothers.....	October 13.....	October 15.....	(¹)	350
Perou.....	French Line.....	October 13.....	October 15.....	.....	185
Pastores.....	United Fruit Co.....	October 13.....	October 15.....	.....	683
Wyoming.....	French Line.....	October 14.....	October 14.....	.....	86
Axel Johnson.....	Johnson Line.....	October 14.....	October 14.....	(¹)	400
Baarn.....	Royal Netherlands S. S. Co.....	October 14.....	October 15.....	.....	254
Lorgia.....	Pacific Steam Navigation Co.....	October 14.....	October 15.....	.....	55
Counsellor.....	T. & J. Harrison.....	October 14.....	October 16.....	.....	459
Santa Clara.....	Grace Line.....	October 15.....	October 15.....	(²)	86
Venezuela.....	Royal Netherlands S. S. Co.....	October 15.....	October 15.....	.....	93
Benjamin Franklin.....	Fred Olsen & Co.....	October 15.....	October 15.....	(¹)	272
Metapan.....	United Fruit Co.....	October 15.....	October 16.....	.....	616
Iriona.....	United Fruit Co.....	October 15.....	October 16.....	.....	1,229
Vinland.....	O. A. Knutson.....	October 15.....	October 16.....	(¹)	70
Araua.....	Pacific Steam Navigation Co.....	October 16.....	October 16.....	.....	272
Drechtijk.....	Pacific Steam Navigation Co.....	October 16.....	October 16.....	.....	15
Emil Kerdorf.....	Hamburg-American Line.....	October 16.....	October 17.....	.....	335
Cellina.....	Panama R. R. S. S. Line.....	October 16.....	October 17.....	.....	151
Bridgetown.....	United Fruit Co.....	October 17.....	October 17.....	.....	27
Esequibo.....	Pacific Steam Navigation Co.....	October 17.....	October 17.....	.....	10
Venezuela.....	Royal Netherlands S. S. Co.....	October 17.....	October 18.....	.....	2
Seattle.....	Hamburg-American Line.....	October 17.....	October 18.....	.....	138
Amapala.....	Standard Fruit Co.....	October 17.....	October 18.....	.....	154
Knute Nelson.....	Fred Olsen & Co.....	October 17.....	October 18.....	(¹)	327
Lochmonar.....	Royal Mail Steam Packet Co.....	October 17.....	October 18.....	.....	28
Rugia.....	Hamburg-American Line.....	October 18.....	October 18.....	.....	14
Iriona.....	United Fruit Co.....	October 18.....	October 18.....	(¹)	276
Belray.....	Aluminium Line.....	October 18.....	October 18.....	.....	130

¹ No cargo discharged.

² No cargo laded.

“Reina del Pacifico” Launched.

The Pacific Steam Navigation Company has announced the launching of the *Reina del Pacifico*, combination freight and passenger steamer to be used in its service between Liverpool and the west coast of South America, via the Panama Canal. Of 17,300 gross tons, the new vessel is 550 feet long and 76 feet beam, and has accommodations for 880 passengers in first, second, and third classes. She is of the straight stem and cruiser stern type with three superstructure decks above a continuous fore and aft shelter deck.

It is stated that the new ship will make the run between Liverpool and Valparaiso in 29 days, or 6 days less than the steamers now in the service.

Sale of Diesel Oil at Cristobal by Arrow Oil Company.

The Arrow Oil Company, which is a subsidiary of W. R. Grace & Company and has sold fuel oil at both ends of the Canal and Diesel oil at Balboa for a number of years, has made arrangements for the sale of Diesel oil at Cristobal. No new tanks are being devoted to the storage of Diesel oil but delivery from the stock of another company may be made for account of the Arrow Company to customers of the latter.

Diesel oil is now for sale at Cristobal by two companies and at Balboa by five.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending October 25, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Annie Johnson	Johnson Line	October 12	October 13	141	
Santa Rita	Grace Line	October 13	October 13	68	
San Simeon	Quaker Line	October 13	October 17	536	536
Ginyo Maru	Nippon Yusen Kaisha	October 14	October 14	86	14
Santa Clara	Grace Line	October 15	October 15	113	
Baarn	Royal Netherlands S. S. Co.	October 15	October 15	103	
Loriga	Pacific Steam Navigation Co.	October 15	October 15		50
Somme	U. S. Government	October 16	October 17	52	4
City of Panama	Panama Mail S. S. Co.	October 16	October 16	124	
California	Panama-Pacific Line	October 17	October 17		172
Emil Kirdorf	Hamburg-American Line	October 18	October 18	199	35
Knute Nelson	Fred Olsen & Co.	October 18	October 18	512	
Sapelo	U. S. Government	October 19	October 19	10,233	
Cauca	National Navigation Co.	October 18	October 19		70
Saramacca	United Fruit Co.	October 18	October 19	761	62
Panama	East Asiatic Co.	October 20	October 20	6	
City of Panama	Panama Mail S. S. Co.	October 20	October 20		71
Santa Tecla	N. O. & S. A. S. S. Co.	October 20	October 21		77
Kenowis	U. S. Government	October 21	October 23	474	13
Santa Teresa	Grace Line	October 21	October 21		7
Colombia	Panama Mail S. S. Co.	October 21	October 23	64	3
Mojave	General Petroleum Co.	October 21	October 22	10,286	
Guatemala	Panama Mail S. S. Co.	October 21	October 22	86	15
Parana	Royal Mail Steam Packet Co.	October 21	October 22	467	
San Mateo	United Fruit Co.	October 23	October 24	197	
Tai Ping	Barber S. S. Lines	October 25	October 25	255	
Fort Armstrong	Charles Nelson & Co.	October 24	October 26	655	
La Placentia	Union Oil Co.	October 24	October 26	10,853	12

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus for such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, October 25, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam, water draft.		Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Nature.	Tons.				Gross.	Net.		
Hanley	19	1 25	19	6 15	19	13 14	19	14 45	American	Hanley S. S. Co.	440 0	56 0	17 0	Baltimore, Md	Everett, Wash	Ballast	8,310	6,005		
Selma City	19	3 05	19	6 35	19	14 06	19	15 15	American	Isthmian S. S. Lines	424 0	56 0	24 6	Baltimore, Md	Vancouver, B. C.	Steel, general	6,880	5,450		
Levernbank	19	7 00	19	7 25	19	14 53	19	18 20	British	Bank Line, Ltd	420 0	54 0	24 6	Baltimore, Md	Hongkong, China	Cass oil, general	7,662	5,021		
S-20 ¹	19	8 20	19	9 20	19	15 24	19	15 24	American	U. S. Navy	218 0	29 8	20 8	Cristobal, C. Z.	Balboa, C. Z.	Ballast	10,084	7,388		
Japan Arrow	19	16 55	19	17 35	19	9 29	20	10 33	American	Standard Transp. Co.	510 7	62 7	29 0	Boston, Mass	Los Angeles, Calif	Ballast	11,556	7,772		
Canadotte	19	18 05	19	19 20	19	10 46	19	17 35	British	Imperial Oil Co.	430 0	57 6	24 11	New York, N. Y.	Takara, Peru	Ballast	2,899	5,911		
Hanover	19	20 45	19	6 25	20	11 46	20	15 50	American	Panama Inter-oceanic Co.	435 0	57 6	24 11	New Orleans, La	Manila, P. I.	General, cotton	7,982	5,911		
Panama	20	6 35	20	10 10	20	16 34	20	17 35	Danish	East Asiatic Co.	410 0	55 0	18 3	Copenhagen, Den	Vancouver, B. C.	Gen., salt, sand	7,075	5,341		
Toyouma Maru	20	8 10	20	11 20	20	19 03	20	20 09	Japanese	Nippon Yusen Kaisha	445 0	58 0	26 9	Baltimore, Md	Kobe, Japan	General	7,975	5,341		
Mallamak	20	11 15	20	11 25	20	19 40	20	21 00	American	Malloy Transport Co.	333 8	48 0	24 0	Freeport, Tex	Oakland, Calif	Sulphur	5,539	4,112		
Swan	20	14 50	20	17 55	21	11 10	21	12 40	American	U. S. Navy	180 0	35 6		Cristobal, C. Z.	Balboa, C. Z.	Ballast	6,888	4,961		
Rajahstan	20	20 30	20	20 45	21	11 10	21	12 40	British	Dale & Co.	426 0	57 0	18 0	Savona, Italy	Vancouver, B. C.	Ballast	6,782	4,957		
Texas	20	20 30	20	20 45	21	9 07	21	10 25	American	The Texas Co.	417 0	56 1	20 0	Port Harb, N. J.	Los Angeles, Calif	Ballast	4,052	2,236		
Kranstad	20	22 25	21	6 20	21	13 10	21	14 25	Norwegian	Fern Line	382 0	65 3	27 0	Galveston, Tex.	Shanghai, China	Cotton, general	6,082	4,236		
Sun	21	6 15	21	6 40	21	13 45	21	14 55	American	Sun Oil Co.	480 6	66 0	31 0	Chester, Pa.	Los Angeles, Calif	Ballast	9,620	6,476		
Nora	21	7 05	21	7 35	21	15 34	21	18 05	American	Arrow Oil Co.	467 6	62 7	30 6	Aruba, D. W. I.	Iquique, Chile	Fuel oil	13,392	9,918		
Atlantic Sun	21	8 50	21	9 00	21	16 22	21	17 35	American	Sun Oil Co.	429 3	59 2	19 0	Tampa, Florida	Los Angeles, Calif	General	1,612	7,568		
Santa Teresa	21	3 20	21	11 35	21	17 27	21	22 30	American	Gracia Line	350 2	51 6	22 9	New York, N. Y.	Talcahuano, Chile	General	1,200	4,822		
Virid	21	11 20	21	12 10	21	19 21	22	00 10	Norwegian	Anglo-Saxon Pet. Co.	420 0	57 0	15 9	Havana, Cuba	Talcahuano, Chile	General	7,442	5,132		
Minden	21	17 05	21	13 15	21	20 29	21	21 30	German	North German Lloyd	360 7	51 6	16 9	Bremen, Germany	Champerico, Guat	General	1,731	5,776		
Guatemala	20	5 15	21	14 35	21	21 25	22	19 40	American	Panama Mail S. S. Co.	360 2	51 6	23 7	New York, N. Y.	San Francisco, Cal	General	4,822	3,272		
Parana	20	18 30	21	14 45	21	21 58	23	00 10	British	Royal Mail S. S. Co.	375 0	56 3	29 1	London, England	Portland, Oreg	General	1,140	4,717		
Kontagsberg	21	6 25	21	15 32	21	23 10	22	3 01	German	North German Lloyd	431 4	56 3	18 10	Hamburg, Germany	Valparaiso, Chile	General	3,619	3,359		
El Lobo	21	16 00	21	18 15	22	9 26	22	10 57	British	Atlantic Rething Co.	385 2	51 0	18 0	Philadelphia, Pa.	La Libertad, Ecuador	General	4,577	3,326		
Santa Vicente	21	17 45	22	6 15	22	13 00	22	15 30	American	Quaker Line	410 5	54 3	18 5	Philadelphia, Pa.	Tacoma, Wash	General	2,920	6,957		
Edwin	22	1 40	22	6 15	22	13 53	22	15 00	American	Arrow Line	410 0	54 2	18 4	Jacksonville, Fla.	San Francisco, Cal	General	3,820	6,603		
Christenson	22	6 30	22	7 10	22	14 27	22	15 40	American	Amer-Hawaiian Line	415 0	63 7	18 9	Boston, Mass.	Seattle, Wash	General	1,875	7,380		
Alaskan	22	8 40	22	10 05	22	16 13	22	17 15	Japanese	Osaka Shosen Kaisha	445 0	60 0	20 8	Boston, Mass.	Shanghai, China	General	3,311	8,982		
Tokai Maru	22	8 40	22	10 05	22	16 13	22	17 15	Japanese	Osaka Shosen Kaisha	445 0	60 0	20 8	Boston, Mass.	Shanghai, China	General	3,311	8,982		
Lewis	22	16 15	22	16 30	23	9 27	23	10 30	American	Luckenbach Line	496 0	68 2	22 0	Boston, Mass.	Seattle, Wash	General	3,688	11,487		
Illinois	22	6 45	23	6 00	23	13 23	23	14 55	French	French Line	400 0	51 0	16 8	Havre, France	Corral, Chile	General	7,682	6,336		
Leise Maersk	22	7 10	23	7 30	23	14 44	23	15 50	Danish	A. P. Moller	302 2	44 2	19 0	New York, N. Y.	Manila, P. I.	General	2,909	3,212		
Tamara	22	9 15	23	9 25	23	16 07	24	7 05	British	Shaw, Savill & Albion	500 0	63 0	27 6	London, England	Auckland, N. Z.	General	8,825	5,952		
El Porcuico	22	10 05	23	10 25	23	17 51	24	22 40	Panamaian	Panamaian Gov't	125 0	23 0	14 5	Colon, R. P.	Panama, R. P.	Ballast	288	101		
Orduña	22	1 45	23	10 25	23	17 38	23	18 48	British	Pacific Steam Nav. Co.	500 0	67 0	28 6	Liverpool, England	Talcahuano, Chile	General	3,307	17,146		
Wisconsin	22	1 25	23	12 15	23	19 04	23	20 18	French	French Line	470 0	61 3	23 9	Dunkirk, France	Vancouver, B. C.	Gen., iron, pipes	1,545	10,494		
Tacoma City	22	8 25	23	14 50	23	21 42	23	22 51	British	Reardon Smith Line	400 0	54 3	14 3	Sorel, Canada	Vancouver, B. C.	Ballast	6,947	5,358		

¹ Tanker. ² Motor ship. ³ Submarine. ⁴ Mine sweeper. ⁵ Transport.

Pacific Grove ¹	21	13.40	24	6.15	24	13.14	24	17.05	British	450.0	60.6	21.1	Glasgow, Scotland	Vancouver, B. C.	General, bananas	1,704	10,086	7,226
San Domingo ¹	22	22.05	24	6.15	24	13.22	24	14.40	American	376.0	52.3	20.0	Baltimore, Md.	Seattle, Wash.	General	2,783	5,455	3,902
Floreana ¹	22	00.40	24	6.15	24	16.01	24	21.15	Colombian	150.0	27.2	12.0	Rio Haeha, Colom.	Buenaventura, Col.	Salt	625	4,470	307
Silverstrand ²	23	20.45	24	7.25	24	14.14	24	15.20	British	455.0	61.0	21.0	New York, N. Y.	Sourabaya, Java	General	3,795	9,576	6,618
Munster ¹	23	22.20	24	7.35	24	15.05	24	18.49	British	428.0	56.0	22.0	Philadelphia, Pa.	Mamila, P. I.	Kerosene, general	7,228	7,596	5,159
Castle ²	24	1.30	24	8.40	24	16.14	24	17.20	American	424.0	56.2	24.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,394	7,394	5,099
Hugonot ¹	23	20.00	24	9.35	24	17.07	24	18.00	Chilean	422.0	56.0	23.5	New York, N. Y.	Valparaiso, Chile	General	1,581	7,754	4,672
Trengga ¹	24	7.15	24	9.55	24	17.40	24	18.48	British	400.0	52.3	8.0	Newport, News, Va.	Pimental, Peru	Ballast	5,734	4,082	4,082
Tengo ¹	24	9.35	24	11.10	24	18.16	24	19.30	British	390.0	53.0	15.2	Montreal, Canada	Vancouver, B. C.	Ballast	5,625	4,158	4,158
Simonsburn ¹	23	21.05	24	13.15	24	20.14	25	16.00	American	300.0	45.0	18.11	New Orleans, La.	Talshuano, Chile	General	1,932	3,256	2,010
Nasa Chief ¹	23	11.00	24	14.30	24	21.31	24	22.40	Japanese	430.0	56.0	21.0	Buenos Aires, Arg	Yokohama, Japan	Cotton, hides	3,128	7,875	5,821
Montevideo ¹	24	19.05	24	19.30	25	11.58	25	13.30	American	480.0	66.0	21.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast	9,607	6,951	6,951
Eastern Sun ¹	24	15.45	25	6.20	25	14.00	25	15.25	American	315.2	44.2	18.3	Cristobal, C. Z.	San Francisco, Calif.	Ballast	3,496	2,141	2,141
San Mateo ¹	24	13.05	25	6.40	25	14.04	25	15.25	Dutch	202.0	33.1	11.3	Cristobal, C. Z.	Guayaquil, Ecuador	General	66	1,183	742
Barait ¹	24	13.05	25	6.40	25	14.04	25	15.25	Dutch	202.0	33.1	11.3	Cristobal, C. Z.	Guayaquil, Ecuador	General	66	1,183	742
Lena ¹	24	21.30	25	6.05	25	13.18	25	14.37	American	425.0	53.7	24.0	Houston, Tex.	Los Angeles, Calif.	General	5,756	7,217	5,295
Lukenbach ¹	24	21.30	25	6.05	25	13.18	25	14.37	American	425.0	53.7	24.0	Houston, Tex.	Los Angeles, Calif.	General	5,756	7,217	5,295
David ¹	25	2.35	25	7.25	25	16.16	25	17.50	American	430.0	59.2	19.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,629	5,325	5,325
McKelvey ¹	25	7.05	25	7.35	25	17.15	25	18.45	American	409.0	54.0	18.6	Boston, Mass	Seattle, Wash.	Steel, general	3,385	6,602	4,754
Sage Brush ¹	25	1.45	25	8.15	25	18.12	25	19.15	British	415.0	56.0	19.1	Tyne, England	Vancouver, B. C.	Ballast	7,617	5,458	5,458
Normanstar ¹	18	21.45	25	8.55	25	17.14	25	21.45	Colombian	116.0	21.1	9.0	Cristobal, C. Z.	Buenaventura, Col.	General	143	211	124
Caldas ²	18	21.45	25	8.55	25	17.14	25	21.45	Colombian	116.0	21.1	9.0	Cristobal, C. Z.	Buenaventura, Col.	General	143	211	124
Santi ¹	25	6.40	25	9.20	25	18.15	25	19.15	Spanish	331.0	48.0	13.0	Barry, England	Chile	Ballast	3,334	2,098	2,098
West Notus ¹	25	9.20	25	9.45	25	18.55	25	19.55	American	410.5	54.3	23.7	San Lorenzo, Arg.	Vancouver, B. C.	General	6,936	10,423	7,456
Westmoreland ¹	25	9.50	25	10.10	25	19.10	26	00.04	British	473.0	59.6	21.10	London, England	Dunedin, N. Z.	General	1,483	10,423	7,456
Cerigo ¹	19	19.30	25	11.00	25	20.40	25	21.45	German	227.0	34.0	14.1	Cristobal, C. Z.	Guayaquil, Ecuador	General	146	1,572	1,011
City of Panama ²	20	17.00	25	11.00	25	20.40	25	21.45	American	296.1	46.0	18.8	Cristobal, C. Z.	San Francisco, Calif.	General	1,335	3,848	2,603
Athequeen ¹	25	6.00	25	12.20	25	20.58	25	22.30	British	471.2	62.0	18.6	New Orleans, La.	Los Angeles, Calif.	Ballast	1,335	3,848	2,603
Point Garda ¹	25	12.50	25	13.15	25	21.15	25	22.40	American	324.0	46.0	21.0	Corpus Christi, Tex.	Seattle, Wash.	General, lumber	3,141	3,934	2,643

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

¹ Tanker.

² Motor schooner.

San Anselmo ¹	18	15.00	19	6.38	19	14.00	19	14.00	American	410.5	54.2	27.0	Portland, Oreg.	New York, N. Y.	Lumber, general	5,721	6,755	4,887
Tongking ²	19	4.10	19	7.05	19	14.30	19	14.30	Denish	410.0	55.2	29.0	Vancouver, B. C.	Copenhagen, Den.	General	8,623	7,013	5,317
Iwatsang Maru ¹	19	17.15	19	7.35	19	15.15	19	16.30	Japanese	385.0	51.0	28.3	Olympia, Wash.	Gaston, England	Lumber, wheat	7,103	6,230	4,574
Democracy ¹	19	6.35	19	8.50	19	15.45	19	15.45	American	377.0	52.0	23.2	Los Angeles, Calif.	New York, N. Y.	Lumber	6,000	5,434	3,969
Cerigo ¹	19	11.40	19	12.03	19	19.50			German	227.2	34.4	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	General	655	1,372	1,011
Canadian ¹	19	11.45	19	12.18	19	21.00	19	23.15	British	400.6	52.3	24.0	Vancouver, B. C.	Montreal, Canada	Lumber, general	5,910	5,893	4,182
Seigneur ¹	19	12.50	20	6.09	20	17.40	20	17.40	American	432.6	56.2	23.3	Los Angeles, Calif.	Fall River, Mass	Lumber, general	10,351	7,426	5,073
Arcteam ¹	19	23.10	20	6.31	20	15.05	20	17.55	Norwegian	415.0	54.9	19.0	Vancouver, B. C.	Buenos Aires, Arg.	Lumber, general	3,692	6,893	5,216
Brimmer ²	19	23.10	20	6.31	20	15.05	20	17.55	Norwegian	415.0	54.9	19.0	Vancouver, B. C.	Buenos Aires, Arg.	Lumber, general	3,692	6,893	5,216
E. J. Hooper ²	19	11.45	19	12.18	19	21.00	19	23.15	British	400.6	52.3	24.0	Vancouver, B. C.	Montreal, Canada	Lumber, general	5,910	5,893	4,182
Canadian ¹	20	3.00	20	7.28	20	15.30	20	15.30	American	400.0	52.3	19.0	Balboa, C. Z.	Cristobal, C. Z.	Towing barge	3,740	5,853	4,099
Explorer ¹	20	8.06	20	9.04	20	16.55	20	20.10	British	424.2	56.2	26.0	Brisbane, Australia	Montreal, Canada	Nitrate of soda	8,700	7,611	5,450
Steel Engineer ¹	20	8.06	20	9.04	20	16.55	20	20.10	British	424.2	56.2	26.0	Tooeptilla, Chile	Wilmington, N. C.	Nitrate of soda	8,700	7,611	5,450
City of Panama ²	20	5.50	20	10.20	20	17.00			American	296.0	46.9	16.2	Buenaventura, Col.	Cristobal, C. Z.	General	415	3,348	2,603

³ Fruits, wool, and hides.

⁴ Gasoline and kerosene.

⁵ Launch.

⁶ Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Salt		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Beam.	draft.			Nature.	Tons.	Gross.	Net.
Santa Eulalia..	20	7.00	20	11.26	20	19.00	20	19.00	American.	Amer. & Cuban S. S. Co.	251.0	43.6	23.0	Honolulu, T. H.	Baltimore, Md.	Sugar.	3,304	2,823	1,730
S-15..			20	12.35	20	19.00	20	19.00	American.	U. S. Navy	231.0	20.0	20.0	Balboa, C. Z.	Cristobal, C. Z.				
S-17..			20	12.35	20	19.00	20	19.00	American.	U. S. Navy	231.0	20.0	20.0	Balboa, C. Z.	Cristobal, C. Z.				
Hoarlen..	20	13.15	20	14.03	20	21.43	21	11.30	Dutch.	Royal Neth. S. S. Co.	375.0	51.2	25.0	Valparaiso, Chile	Hamburg, Germany	Nitrate, general.	5,115	4,759	3,660
Taijin Maru..	20	14.00	20	14.53	20	22.30	20	22.30	Japanese.	Shunomura K. Kaisha.	350.0	51.2	25.0	Portland, Ore.	Cobb, Ireland	Wheat	7,100	5,616	4,117
Lebore..	20	2.30	20	16.13	20	13.45	21	13.45	British.	Ors S. Corp.	549.6	72.3	35.0	Champanero, Chile	Baltimore, Md.	Iron ore	21,500	14,325	4,685
Salvador..	20	23.45	20	17.44	21	10.25	21	10.25	British.	Pacific Steam Nav. Co.	215.0	34.3	13.0	Curacao, C. Z.	Cristobal, C. Z.	Coffee, general.	55	1,270	735
Sonjotico..	20	23.45	20	16.53	21	16.40	21	16.40	British.	Anglo-Mexican Pet. Co.	400.2	52.3	22.0	Iquique, Chile.	Curacao, D. W. I.	Ballast.	6,032	3,892	
J. L.			20	23.35	21	14.55	21	14.55	American.	Luxembach Line.	448.9	60.2	31.0	Portland, Ore.	Boston, Mass.	General.	9,000	9,204	6,861
Lukenbaoh..	20	5.37	21	8.13	21	18.35	21	18.35	American.	Amer.-Hawaiian Line.	460.0	57.8	26.2	Portland, Ore.	Boston, Mass.	General.	7,467	6,829	4,627
Pacific..	21	6.00	21	8.42	21	19.25	21	19.25	British.	Furness, Withy & Co.	435.9	60.2	27.0	Vancouver, B. C.	Glasgow, Scotland.	General.	8,159	9,641	6,989
Enterprise..	20	14.30	21	10.25	21	20.00	21	20.00	American.	N. O. & S. A. S. S. Co.	298.6	40.0	21.5	Talcahuano, Chile.	New Orleans, La.	General, logs.	3,252 ¹	2,852	1,803
Santa Tecla..	20	14.30	21	10.25	21	20.00	21	20.00	American.	N. O. & S. A. S. S. Co.	298.6	40.0	21.5	Talcahuano, Chile.	New Orleans, La.	General, logs.	3,252 ¹	2,852	1,803
Canadian..	21	16.15	21	17.09	22	14.45	22	14.55	British.	Can. Nat. Steamships.	400.0	52.4	22.0	Vancouver, B. C.	Montreal, Canada	Lumber, general.	5,709	5,858	4,108
Plunter..	21	10.05	22	6.09	22	13.20	22	9.05	American.	Panama Mail S. S. Co.	380.0	48.7	24.0	San Francisco, Cal.	New York, N. Y.	General.	1,706	6,015	4,281
Colombia..	21	19.00	22	6.43	22	14.10	22	13.20	American.	Calmar S. S. Corp.	450.6	57.2	30.0	Cruz Grande, Chile	Baltimore, Md.	Blast furnace ore	11,319	7,956	4,866
Cubore..	21	19.50	22	7.09	22	14.50	22	14.30	American.	Standard Transp. Co.	467.6	62.7	37.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	11,264	9,698	6,862
Sylvan Arrow..	22	6.10	22	7.59	22	16.45	22	19.45	Japanese.	Nippon Yusen Kaisha.	405.0	54.3	25.0	Manila, P. I.	Boston, Mass.	General.	4,800	6,962	4,967
Kuma Maru..	22	6.10	22	7.59	22	16.45	22	19.45	Japanese.	Nippon Yusen Kaisha.	405.0	54.3	25.0	Manila, P. I.	Boston, Mass.	General.	4,800	6,962	4,967
Wido..	22	11.30	22	12.45	22	20.40	22	20.40	American.	Rolland Line	393.4	54.3	27.0	San Francisco, Cal.	Hamburg, Germany	General.	7,899	6,585	4,681
Kerowia..	22	11.30	22	12.45	22	20.40	22	20.40	American.	Rolland Line	393.4	54.3	27.0	San Francisco, Cal.	Hamburg, Germany	General.	7,899	6,585	4,681
Daghestan..	22	23.00	23	6.40	23	13.42	23	13.30	British.	Shell Oil Co.	405.0	52.0	27.0	Los Angeles, Calif.	Lands End, Eng.	Gasoline.	7,523	6,355	4,657
Australia..	22	1.00	23	7.40	23	15.50	23	13.30	American.	The Texas Co.	509.7	70.3	31.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	16,800	12,514	8,427
Grethe Star..	23	00.30	23	8.00	23	18.05	23	18.05	British.	The Blue Star Line	389.8	53.2	21.3	Seattle, Wash.	Buenos Aires, Arg.	Chilled fruit	2,608	6,014	4,492
Persphone..	23	7.00	23	8.41	23	18.00	23	18.00	Danzig.	W. Tankschiff Rheiderl.	408.6	63.2	27.0	Los Angeles, Calif.	Ellsmere Pt., Eng.	Gasoline.	10,907	9,336	6,338
S-20..			23	10.20	23	10.45			American.	U. S. Navy	231.0	20.0	20.0	Balboa, C. Z.	Cristobal, C. Z.				
Liverpool..	23	13.45	23	14.21	23	20.30	23	22.40	Japanese.	Balfour Guthrie & Co.	385.0	51.0	28.0	Portland, Ore.	Norfolk, Va.	Wheat	7,693	5,919	4,400
Maru..	23	13.50	23	15.01	23	22.35	24	10.30	German.	Hamburg-American Line	422.3	59.1	26.0	Vancouver, B. C.	Hamburg, Germany	General.	7,441	8,454	6,344
San Francisco..	23	17.15	23	18.30	24	11.54	24	11.13	Yugoslav.	Euburza & Co.	435.0	58.2	26.0	Iquique, Chile.	Azores	Nitrate.	10,000	7,710	5,674
Avala..	23	16.55	24	6.36	24	13.45	25	6.20	American.	United Fruit Co.	315.2	44.2	19.0	San Francisco, Cal.	Cristobal, C. Z.	Lumber, general.	402	3,496	2,141
San Mateo..	23	16.55	24	6.36	24	13.45	25	6.20	American.	United Fruit Co.	315.2	44.2	19.0	San Francisco, Cal.	Cristobal, C. Z.	Lumber, general.	402	3,496	2,141
Svean..	23	16.55	24	6.36	24	13.45	25	6.20	American.	United Fruit Co.	315.2	44.2	19.0	San Francisco, Cal.	Cristobal, C. Z.	Lumber, general.	402	3,496	2,141
Levant Arrow..	23	21.00	24	6.38	24	13.35	24	14.55	American.	Standard Transp. Co.	468.3	62.7	28.0	Los Angeles, Calif.	Portland, Maine	Gasoline.	11,303	9,181	6,946
Baralt..	24	3.00	24	7.35	24	15.05	25	6.16	Dutch.	Royal Neth. S. S. Co.	202.9	33.1	13.0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	576	1,842	742
Oreona..	24	2.30	24	9.36	24	18.45	24	19.19	British.	Pacific Steam Nav. Co.	511.6	62.0	28.3	Talcahuano, Chile.	Liverpool, England	General.	6,140	12,417	8,305
Oreona..	24	11.45	24	13.07	24	19.40	24	19.19	British.	Pacific Steam Nav. Co.	407.7	63.7	29.0	Seattle, Wash.	Boston, Mass.	General.	8,287	7,079	5,028
Logala..	24	12.30	24	13.27	24	20.48	24	20.48	American.	Amer.-Hawaiian Line.	410.0	56.0	28.5	Los Angeles, Calif.	New York, N. Y.	Gas oil	8,900	8,201	6,225
Beagle..	24	14.30	24	15.16	24	22.40	25	17.20	French.	Standard Transp. Co.	425.0	54.8	24.0	Vancouver, B. C.	Le Havr., France.	General.	6,452	7,351	5,189
Arizona..	24	14.30	24	15.16	24	22.40	25	17.20	French.	Standard Transp. Co.	425.0	54.8	24.0	Vancouver, B. C.	Le Havr., France.	General.	6,452	7,351	5,189

* Tanker. ** Motor ship. *** For orders.

Western	24	17.30	25	5.57	25	14.45	25	14.45	American	Sun Oil Co.	489.6	63.0	23.4	Los Angeles, Calif.	Chuster, Pa.	Gasoline	13,275	9,607	6,551
Sun	21	21.00	25	7.11	25	16.15	25	19.45	British <td>C. T. Bowring & Co.</td> <td>497.4</td> <td>52.2</td> <td>25.2</td> <td>La Libertad, Ecua.</td> <td>Philadelphia, Pa.</td> <td>Crude oil</td> <td>7,732</td> <td>6,046</td> <td>4,326</td>	C. T. Bowring & Co.	497.4	52.2	25.2	La Libertad, Ecua.	Philadelphia, Pa.	Crude oil	7,732	6,046	4,326
El Cervo																			
Gen. G. W.																			
Getty																			
Shikuan	25	8.45	25	9.40	25	17.30	25	17.40	British <td>U. S. Army</td> <td>98.0</td> <td>22.0</td> <td></td> <td>Cristobal, C. Z.</td> <td>Nitrate</td> <td>7,940</td> <td>5,852</td> <td>4,112</td>	U. S. Army	98.0	22.0		Cristobal, C. Z.	Nitrate	7,940	5,852	4,112	
Henderson																			
Maru	25	11.00	25	12.24	25	19.55	25	21.50	Japanese <td>Mitsui & Co.</td> <td>409.2</td> <td>53.3</td> <td>24.0</td> <td>Gaston, England.</td> <td>Lumber, wheat</td> <td>6,933</td> <td></td> <td></td> <td></td>	Mitsui & Co.	409.2	53.3	24.0	Gaston, England.	Lumber, wheat	6,933			
Kyushia	25	11.30	25	12.38	25	20.45	26	1.30	German	Hamburg-American Line	337.0	48.0	21.0	Grimsby, England.	Lumber	3,647			
Santa Barbara	25	10.30	25	13.25	25	21.55	26	2.25	American	Grace Line	485.0	64.0	24.0	Valparaiso, Chile	New York, N. Y.	2,675	10,687	6,633	
Tai Ping	25	2.00	25	15.00	25	21.55	26	2.04	Norwegian	Barber S. Line	451.0	69.0	24.0	Davao, P. I.	General	5,888	9,891	6,829	
Pacific	25	14.45	25	15.50	25	23.35	26	13.20	Italian	Nav. Libera-Triestina	436.6	55.4	25.0		Whate, general	8,500	7,098	4,493	
Redwood	25	17.00	25	17.51	26	12.45	26	12.45	American	Dimon S. S. Corp.	499.6	54.2	24.5	Seattle, Wash.	Baltimore, Md.	Lumber, general	7,688	5,634	3,557

Junior mine planter.

All hours are express at the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
October 19.	Pastores	United Fruit Co.	Port Limon, Costa Rica.	October 19.	No. 945-M ¹⁴	Pan Americo-Grace Airways	Talara, via wayports.
October 20.	Ulino	United Fruit Co.	New York via Habana.	October 19.	No. 9635 ¹⁴	Pan American Airways	San Salvador and wayports.
October 20.	No. 9685 ¹⁴	Pan American Airways	San Salvador and wayports.	October 19.	Pastores	United Fruit Co.	New York via Habana.
October 21.	Dario C-35 ¹⁴	Scudis Airplane Co.	Barranquilla and wayports.	October 19.	No. 9137 ¹⁴	Pan American Airways	Miami via wayports.
October 21.	No. 945-M ¹⁴	Pan Americo-Grace Airways	Talara via wayports.	October 20.	No. 9670 ¹⁴	Pan American Airways	San Salvador and wayports.
October 22.	Carare	Elders & Fryes Line.	Avonmouth via wayports.	October 20.	No. 1432-M ¹⁴	Pan American Airways	Miami via wayports.
October 22.	Saxola	United Fruit Co.	New York via Kingston.	October 20.	Ulina	United Fruit Co.	Port Limon, Costa Rica.
October 22.	Tatum	United Fruit Co.	New Orleans, La.	October 22.	Carare	Elders & Fryes Line.	Avonmouth via wayports.
October 22.	Yonon	Hamburg-American Line	Hamburg and wayports.	October 22.	No. 945-M ¹⁴	Pan Americo-Grace Airways	Talara via wayports.
October 22.	No. 3776 ¹⁴	Pan American Airways	Miami via wayports.	October 23.	Scudis	Scudis	New York via wayports.
October 23.	Cristobal	Panama R. R. S. Line	New York via Haiti.	October 23.	Tatum	Hamburg-American Line	Tempo and wayports.
October 23.	No. 9085 ¹⁴	Pan American Airways	San Salvador and wayports.	October 23.	Tela	United Fruit Co.	Boels, Rep. of Panama.
October 23.	Daytonian	Leyland S. S. Line.	Liverpool via wayports.	October 23.	Anahueta ¹⁵	United Fruit Co.	Colon, Rep. of Panama.
October 23.	Amelia I.	A. Tagaropoulos	Colon, Rep. of Panama.	October 23.	Anahueta I.	A. Tagaropoulos	Colon, Rep. of Panama.
October 23.	Anahueta ¹⁵	United Fruit Co.	Colon, Rep. of Panama.	October 23.	No. 390-N ¹⁴	Pan American Airways	Colon, Rep. of Panama.
October 23.	Afanada	Standard Fruit & S. S. Co.	New Orleans & Habana.	October 23.	Espeje Figo ¹⁶	Comely & Papi	Colon, Rep. of Panama.
October 25.	Tela	United Fruit Co.	Boels, Rep. of Panama.	October 24.	No. 9685 ¹⁴	Pan American Airways	Colon, Rep. of Panama.
October 25.	No. 390-N ¹⁴	Pan Americo Airways	New Orleans & Habana.	October 24.	Bolivar	Bolivar C-35 ¹⁴	New York via wayports.
October 25.	No. 9670 ¹⁴	Pan American Airways	La Guayra via wayports.	October 24.	Alhulada	Standard Fruit & S. S. Co.	Barranquilla and wayports.
October 25.	No. 9137 ¹⁴	Pan American Airways	San Salvador and wayports.	October 25.	Tela	United Fruit Co.	New Orleans and wayports.
October 25.	Pearl Marie ¹⁶	G. I. Bryan	Miami via wayports.	October 25.	Pearl Marie ¹⁶	G. I. Bryan	New Orleans and wayports.
October 25.	Airmax ¹⁷	Motor boat.	Colon, Rep. of Panama.	October 25.			Bluefields, Nicaragua.

Motor schooner.

PORT OF BALBOA.

October 18.	Saramaea	United Fruit Co.	San Francisco, Calif.	October 19.	Saramaea	United Fruit Co.	San Francisco, Calif.
October 19.	Mojave	Standard Transportation Co.	Los Angeles, Calif.	October 22.	Mojave	Standard Transportation Co.	Los Angeles, Calif.
October 22.	Dos Hermanos ¹⁷	Hans Elliott	Panama, Rep. of Panama.	October 22.	Dos Hermanos ¹⁷	Hans Elliott	Panama, Rep. of Panama.
October 22.	Real ¹⁷	Hans Elliott	Panama, Rep. of Panama.	October 22.	Real ¹⁷	Hans Elliott	Panama, Rep. of Panama.
October 24.	Nueva Panama ¹⁸	Hans Elliott	Panama, Rep. of Panama.	October 22.	Nueva Panama ¹⁸	Hans Elliott	Panama, Rep. of Panama.
October 24.	La Pacifica	Union Oil Co. of California.	Los Angeles, Calif.				

Motor ship.

* Other than ships passing through the Canal.

* DEPARTURES.

Cargo Through the Canal During September, 1930.

On pages 190 and 191 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in September, 1930. This cargo, segregated according to direction, as compared with September, 1929, and the differences, are shown in the following tabulation:

	September, 1929.	September, 1930.	Difference.
Atlantic to Pacific	<i>Long tons.</i> 746,289	<i>Long tons.</i> 595,589	<i>Long tons.</i> -150,700
Pacific to Atlantic	1,686,494	1,463,993	-222,501
Total	2,432,783	2,059,582	-373,201

It will be noted from the above that the Atlantic to Pacific tonnage decreased 150,700 tons, or 20.2 per cent, as compared with September, 1929, and that from the Pacific to the Atlantic decreased 222,501 tons, or 13.2 per cent, making a total decrease of cargo tonnage in both directions of 373,201 tons, or 15.3 per cent. As in the past several months, the heavy decline in Pacific-bound tonnage has been due to a general curtailment in shipments and decreases in cargo tonnage of several important commodities as indicated under "Principal commodities." The Atlantic-bound tonnage, while showing increases in many of the ordinarily important commodities, was depressed by heavy decreases in the shipments of nitrates, ores (principally iron), and lumber, the aggregate decrease of which as compared with September, 1929, amounted to over 290,000 tons.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-seven and two-tenths per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 23.9 per cent in Europe. Tonnage from the United States decreased 97,340 tons, or 19.5 per cent, as compared with September, 1929, and that from Europe fell short by 40,911 tons, or 22.3 per cent. The proportion of the tonnage from each of these areas to the total tonnage was approximately the same in September of both years.

Destination.—Forty-five and two-tenths per cent of the Pacific-bound tonnage was destined to the United States; 14.3 per cent to South America; 23.1 per cent to Asia; and 12.9 per cent to Australasia. Cargo tonnage to all these areas declined as compared with September, 1929, in actual tonnage as follows: To the United States, 55,825 tons, or 17.2 per cent; to South America, 37,701 tons, or 30.6 per cent; to Asia, 31,251 tons, or 18.5 per cent; and to Australasia, 9,814 tons, or 11.3 per cent. In point of the percentage of the cargo to these various areas to the total Pacific-bound tonnage, slight increases were registered in that to the United States, Asia, and Australasia, while that to South America decreased.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 63.1 per cent came from the United States; 19.1 per cent from South America; 10.4 per cent from Canada; 4.7 per cent from Australasia; and 3.7 per cent from Asia. As compared with the corresponding month a year ago, tonnage from the United States decreased slightly—9,960 tons, or a little over

1 per cent—while the percentage of the total cargo made a heavy increase. Tonnage from South America showed a heavy decrease in its relation to the total tonnage, and a loss in actual figures of 244,008 tons, or 46.6 per cent, as compared with September, 1929. The proportion of the total tonnage coming out of South America in September, 1929, was over 31 per cent. The curtailment of shipments of nitrates and iron ore was largely responsible for this decrease. Tonnage originating in Canada and Australasia made decisive increases both in actual tonnage and in their respective relations to the total cargo. That from Canada increased 70,388 tons, or 85.4 per cent, while that from Australasia increased 25,092 tons, or 58 per cent. The heavy increase in tonnage from Canada was accounted for principally by the heavier wheat movement out of that area, while the gain from Australasia was due to increased shipments of food products in cold storage and iron ore. Cargo from Asia decreased 34,329 tons, or 38.2 per cent, and also showed a sharp decrease in its relation to the total cargo. Decline in shipments of coconut oil and rice accounted for the large decrease in cargo tonnage from Asia.

Destination.—Segregated according to destination, 51.9 per cent of the cargo in this direction went to the United States, and 40.2 per cent to Europe. Tonnage to the United States decreased in its proportion to the total tonnage and showed a decrease in actual tonnage of 170,410 tons, or 18.3 per cent. That to Europe decreased 60,420 tons, or 9.3 per cent, although its relation to the total cargo in September, 1930, was slightly greater.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify almost 88 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 12 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Atlantic to Pacific-bound commodities which aggregated more than 10,000 tons for September, 1929, or September, 1930, are listed in the following tabulation, showing differences:

Commodity.	September, 1929.	September, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	
Ammonia	15,488	3,613	-11,875
Asphalt	15,182	6,598	-8,584
Automobiles	18,466	11,089	-7,377
Cement	34,577	14,850	-19,727
Coal and coke	13,831	8,109	-5,722
Cotton	13,354	28,936	+15,582
Manufactured goods:			
Iron and steel	160,999	131,331	-29,668
Machinery	14,659	14,116	-543
Railroad material	8,748	9,927	+1,179
Tinplate	19,828	17,229	-2,599
Textiles and miscellaneous	23,122	14,076	-9,046
Metals, various	15,397	5,177	-10,220
Oils, mineral	56,485	34,912	-21,573
Paper	21,085	16,231	-4,854
Phosphates	18,127	39,537	+21,410
Sugar	1,454	14,320	+12,866
Sulphur	10,762	13,163	+2,401
Tobacco	12,888	6,937	-5,951

The above 18 commodity groups for September, 1930, comprise 66 per cent of the cargo moving from the Atlantic to the Pacific. Thirteen of the items decreased in tonnage as compared with September,

1929, while 5 showed increases. The heaviest decline was in manufactures of iron and steel while phosphates registered the largest increase.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify over 97 per cent of all cargo moving from the Pacific to the Atlantic during the month of September, 1930. Commodities which aggregated more than 10,000 tons either during the past month on the corresponding month in 1929 are listed below:

Commodity.	September, 1929.	September, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	37,560	29,628	-7,932
Beans.....	20,352	8,394	-11,958
Canned goods (fish, fruit, vegetables, etc.).....	94,987	104,427	+9,440
Cold storage (food products).....	17,053	20,767	+3,714
Copra.....	10,955	8,761	-2,194
Cotton.....	8,145	10,149	+2,004
Flour.....	7,764	10,361	+2,597
Fruit, dried.....	14,207	16,949	+2,742
Lumber.....	278,641	231,141	-47,500
Metals (principally copper).....	50,835	55,417	+4,582
Nitrates.....	216,115	63,164	-152,951
Oils, mineral.....	430,222	462,213	+31,991
Ores (principally iron).....	159,850	68,542	-91,308
Paper.....	5,226	10,369	+5,643
Rice.....	18,185	3,124	-15,061
Paper pulp.....	7,127	12,827	+5,700
Sugar.....	70,336	81,752	+11,416
Wheat.....	85,656	117,500	+31,844

* Fresh fruit not included.

The above 18 commodity groups comprise 89 per cent of the cargo moving from the Pacific to the Atlantic during September, 1930. Eleven of the items showed increases and 7 decreases. Of the latter shipments, nitrates declined 152,951 tons and ores (principally iron) 91,308 tons, the loss in these 2 commodities alone far offsetting the gains in the 11 that showed increases. Mineral oils and wheat registered the heaviest increases with gains of 31,991 tons and 31,844 tons, respectively, over the corresponding month in 1929.

(Continued on page 190.)

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 28, 1930.

No. 784.

Nicaragua, east coast, Cape Gracias a Dios light. The following message was received by the Hydrographic Office from the U. S. S. *Denver* through the Balboa radio station:

October 27, 1930, the light on Cape Gracias a Dios, Nicaragua, was observed to be showing the following characteristics: Flashing white; flash 0.5 second, eclipse 3.0 seconds. Visible 15 miles.
Approximate position: Latitude 15° 00' 13" N., longitude 83° 09' 11" W.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 28, 1930.

No. 786.

Nicaragua, west coast, Corinto Harbor, buoys changed. The commanding officer of the U. S. S. *Rochester* reports the following changes of buoys in Corinto Harbor, Nicaragua, under date of October 22, 1930:

- No. 1 spar buoy is missing and will not be replaced.
- No. 3 spar buoy was replaced this date in 30 feet of water in approximately latitude 12° 28' 08" N., longitude 87° 12' 34" W., on the following bearings: Front entrance beacon 84°, front entrance beacon Dona Paula range 135½°, Morro Cardon 170°

H. BURGESS,
Governor.

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors.

The rates are as follows:

(a) For handling cargo from ship's side to storage place, \$1 per ton of 2,000 pounds or 40 cubic feet on general merchandise, and one-half of the transfer rates provided by Item 34, Panama Canal Tariff No. 10, on other commodities.

(b) For handling cargo from storage place to ship's side, *i. e.*, for delivering or reforwarding it, the same rates as for receiving and storing, as per (a), above. The minimum charge for handling any shipment taken out of storage is \$1.

(c) For storage: First 35 days free; thereafter, 3 cents per day or fraction thereof per ton of 2,000 pounds or $1\frac{1}{2}$ cents per day or fraction thereof per ton of 40 cubic feet.

Special rates on special commodities in large quantities may be obtained on request.

Various lines operating out of Cristobal and Balboa to the west coast of Central and South America will accept their proportion of the through rate for the haul beyond the Isthmus, as explained in the following paragraph:

By virtue of the Canal Zone for Orders arrangement shippers are enabled to consign cargo to the Isthmus and subsequently to reassign it to any port beyond the Isthmus to which there is a through rate from port of origin without sacrificing their right to the through freight rate. This means that when a shipment moves from, say, New York to the Canal Zone, usual local rates will be charged to Cristobal or Balboa, as the case may be; but should the owner wish to reforward to any other port to which there is a through rate from port of origin, he may do so upon payment of the receiving carrier's proportion of the through rate from port of origin to port of ultimate destination, and upon evidence that the shipment, or any part of it, has moved beyond the Isthmus, the initial carrier will refund the difference between its proportion of the through rate applicable and the local rate.

In addition to reassigning beyond the Isthmus, cargo billed Cristobal for Orders may be reassigned to Panama City or line points on the Panama Railroad on the basis of through rates from port of origin to Panama City. In this case the Panama Railroad Company's charges will be the difference between the rate charged to Cristobal by the ocean carrier and the through rate from port of origin to Panama City, and the necessary adjustments with the ocean carrier will be made by the Panama Railroad Company without inconvenience to shippers or consignees. The handling charge from storage place to cars is the same as from storage place to ship's side.

Cargo deposited in Hold for Orders Warehouse, Cristobal, which consignees desire transferred to Hold for Orders Warehouse, Balboa, will be assessed a charge of \$1 per ton on general cargo and one-half the transfer rates on other commodities for handling from the warehouse into cars at Cristobal, and a second charge of the same kind for handling from cars into warehouse at Balboa. The same charge will again apply when the cargo is reforwarded from, or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on Hold for Orders cargo discharged from vessels at Balboa.

Cargo consigned to Hold for Orders, Balboa, arriving at Cristobal piers, and/or cargo consigned to Hold for Orders, Cristobal, on which by previous arrangement the destination has been changed to Hold for Orders, Balboa, prior to arrival of the vessel, will be assessed one handling charge of \$1 per ton on general cargo or one-half of the transfer rates on other commodities for handling from shipside across piers and into cars at Cristobal and from cars into the Hold for Orders Warehouse, Balboa. The same charge will apply when the cargo is reforwarded from or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on cargo moving in the opposite direction.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," will be supplied on request to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, September, 1930.

(Figures represent tons of 2,240 pounds.)

From	NORTH AMERICA.										EUROPE.										Grand total.	Per cent of total cargo.					
	UNITED STATES.					OTHER NORTH AMERICA.					Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.			Europe. ¹	Total, Europe.	East coast of South America.	Egypt.	Africa.
	North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total, United States.	East coast of Canada.	West coast of Canada.	Cristobal, C. Z. ²	West Indies.	Total, North America.	British Isles.																		Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.
NORTH AMERICA:																											
West coast U. S.	522	256	476	16,465	573,197	17,831	17,831	12,653	121	7,021	35,431	615,649	195,352	11,859	1,260	8,463	22,059	3,954	5,139	260	50,570	248,913	8,800	923,362	63.1		
West coast of Canada	17,831	386	363	17,831	12,653	121	579	131	1,076	1,408	32,113	53,789	160	20	2,430	4,084	209	11,574	260	24,831	97,138	3,204	132,155	10.5			
West coast of Cen. Am.	386	253	253	386	253	253	65	131	315	1,408	32,113	53,789	160	20	2,430	4,084	209	11,574	260	24,831	97,138	3,204	132,155	10.5			
Bahian, C. Z.	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	
Hawaiian Islands	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	3,283	
Total, N. America	543,793	4,476	17,106	535,375	12,653	121	7,635	35,965	652,824	249,141	12,019	1,280	10,809	26,249	1,154	16,713	260	75,451	396,157	12,004	1,060,985	72.5	1,060,985	72.5			
SOUTH AMERICA:																											
Chile	58,793	4,031	63,724	1,612	371	110	64,295	22,252	10,697	5,592	4,609	2,570	356	500	33,500	80,217	8,270	152,692	10.4	2,655	0.2	12,707	0.9	12,707	0.9		
Colombia	9,015	4	9,015	2,690	76	64	46,426	30,983	4,346	1,035	12,828	177	342	208	184	16	2,500	7,311	8,113	31	115	962	99,585	6.7			
Ecuador	12,533	2,930	2,620	17,933	23,003	303	76	64	46,426	30,983	4,346	1,035	12,828	177	342	208	184	16	2,500	7,311	8,113	31	115	962	99,585	6.7	
Peru	2,203	2,203	2,203	1,025	144	3,372	783	348	128,372	54,046	15,083	9	6,969	17,765	2,747	540	3,016	42,276	142,401	31	8,270	279,074	19.1				
W. coast, South Amer.	83,499	2,930	7,515	63,947	23,003	303	5,774	348	128,372	54,046	15,083	9	6,969	17,765	2,747	540	3,016	42,276	142,401	31	8,270	279,074	19.1				
Total, S. America	13,700	1,543	13,700	2,595	88	16,205	3,830	1,819	28,135	4	2,645	1,000	3,830	29,139	17,335	50,304	68,328	4.7	20,085	1.4	30,854	2.1	17,335	1.2			
AUSTRALASIA:																											
Australia	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	
New Zealand	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	
Australas. ³	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	1,543	
Total, Australasia	15,243	15,243	15,243	2,693	88	18,024	46,655	4	2,645	1,000	3,830	29,139	17,335	50,304	68,328	4.7	20,085	1.4	30,854	2.1	17,335	1.2	68,328	4.7			
ASIA:																											
Philippine Islands	24,548	17,833	42,491	869	42,401	42,401	42,401	42,401	42,401	42,401	42,401	42,401	42,401	42,401	42,401	42,401	42,401	42,401	42,401	42,401	42,401	42,401	42,401	42,401	42,401	42,401	42,401
China	5,357	591	5,948	869	869	869	869	869	869	869	869	869	869	869	869	869	869	869	869	869	869	869	869	869	869	869	869
Japan	3,422	3,422	3,422	127	13	13	5,862	5,862	5,862	5,862	5,862	5,862	5,862	5,862	5,862	5,862	5,862	5,862	5,862	5,862	5,862	5,862	5,862	5,862	5,862	5,862	
Far East	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	2,832	
Total, Asia	36,159	18,444	54,603	930	13	55,606	678,694	7,406	73,068	759,168	43,391	424,141	517,377	326,854	826,349	842,270	656,128	29,504	45,014	6,991	17,253	3,276	117,727	588,862	12,085	8,270	
Grand total.																											
Per cent of total cargo:																											
September, 1930	46.4	0.5	5.0	51.9	3.0	1.0	2.5	58.4	23.9	1.8	0.1	1.4	3.1	0.5	1.2	0.2	0.2	0.5	0.5	8.0	40.2	0.9	0.5	100.0	.....	
September, 1929	50.1	0.7	4.4	55.2	3.2	0.7	1.4	60.6	19.2	0.8	0.1	1.5	2.9	0.2	0.2	0.5	0.5	11.6	38.5	0.3	0.6	100.0	.....			
September, 1928	43.5	1.3	3.0	53.0	4.6	0.2	1.5	63.8	17.7	0.5	0.1	1.6	2.0	1.2	1.2	0.4	0.4	10.6	37.0	0.6	1.1	0.5	100.0	.....		

¹ General cargo not routed so as to allow segregation between definite ports.

² Includes both local and transit cargo.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective October 27, 1930.

Commodities.	Unit.	Price.
Brass, bar, average	Lb.	\$0.24
Brass, sheet, average	Lb.	.31
Bronze, Tobin, average	Lb.	.26
Gasoline, motor grade	Gal.	.135
Metal, yellow	Lb.	.29
Oakum, Navy, spun	Lb.	.15
Oakum, Navy, unspun	Lb.	.16
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder	Gal.	.23
Oil, burning, Colza	Gal.	1.06
Oil, engine, gas, in drums, Galfriton Mod. No. 2135	Gal.	.36
Oil, engine, gas, extra heavy, in cans, Galfriton No. 2250	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Galfriton, No. 2250	Gal.	.41
Oil, kerosene, in drums	Gal.	.10
Oil, marine engine	Gal.	.50
Paint, lead, white, dry	Lb.	.14
Paint, lead, white, in oil	Lb.	.13
Paint, zinc oxide, dry	Lb.	.10
Paint, zinc oxide, in oil	Lb.	.12
Grease, gear, chain and wire rope, lubricating	Lb.	.05
Grease, yellow, cup, No. 3	Lb.	.08
Grease, yellow, cup, No. 5	Lb.	.09
Soda, ash	Lb.	.03
Waste, cotton, colored	Lb.	.14
Waste, cotton, white	Lb.	.16

Hours of Departure of Passenger Trains.

Following are the hours of departure of the regular passenger trains of the Panama Railroad running between the Atlantic and the Pacific:

From Colon: Daily except Sunday, 7.00 a. m.,

12.15 p. m., 4.30 p. m.; Sunday only, 9.20 a. m., 4.00 p. m.

From Panama: Daily except Sunday, 7.05 a. m., 12.20 p. m., 4.35 p. m.; Sunday only, 7.05 a. m., 6.15 p. m.

The time required for passage from one terminal to the other is 1 hour and 45 minutes.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.
PUBLISHED WEEKLY.

Subscription rates, domestic, \$0.50 per year; foreign, \$1.00; address
The Panama Canal Record, Balboa Heights, Canal Zone, or
The Panama Canal, Washington, D. C.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., November 5, 1930. No. 14.

Canal Traffic During October.

During the month of October, 1930, 517 commercial vessels and 7 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,288,982.08, and on the launches \$28.50, or a total tolls collection of \$2,289,010.58.

The daily average of commercial vessels was 16.68, and the average tolls collection was \$73,838.13, as compared with an average of 15.26 transits and \$68,570.12 in tolls in the previous month. The average amount of tolls paid by each of the commercial transits was \$4,427.43, as compared with \$4,407.62 for the month of September, 1930.

Commercial traffic for October was the second highest in the current calendar year, with respect to both the number of transits and amount of tolls collected, having been exceeded only by the traffic passing through the Canal in January (531 transits and \$2,360,211.24 in tolls). The increase in traffic in October was due to the additional tonnage placed in service to take care of the seasonal increase in shipments, particularly food products. As compared with the traffic passing through in October, 1929, that for October, 1930, shows approximately an 8 per cent decrease.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 10 months of the current calendar year, with the daily averages of transits and tolls, and the totals for the first 10 months of calendar years 1929 and 1928:

Month.	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January.....	531	\$2,360,211.24	17.13	\$76,135.84
February.....	491	2,131,386.12	17.54	76,120.93
March.....	515	2,260,002.36	16.61	72,903.30
April.....	489	2,232,763.00	16.30	74,425.43
May.....	479	2,162,898.60	15.45	69,770.92
June.....	478	2,100,994.53	15.93	70,033.15
July.....	488	2,180,511.82	15.74	70,339.09
August.....	465	2,080,230.42	15.00	67,104.21
September.....	458	2,057,103.58	15.26	68,570.12
October.....	517	2,288,982.08	16.68	73,838.13
Total, first 10 months of calendar year, 1930.....	4,911	21,855,083.75	16.15	71,891.72
Total, first 10 months of calendar year, 1929.....	5,383	23,038,789.02	17.71	75,785.49
Total, first 10 months of calendar year, 1928.....	5,228	21,705,995.54	17.14	71,170.47

As compared with the first 10 months of the calendar year 1929, the corresponding period this year has had 472 fewer transits and \$1,183,705.27 less tolls.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, November 1, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.	
Lesmar.	25	18 10	26	6 05	26	14 28	26	18 09	American.	Calmar S. S. Corp.	409.8	51.2	23.0	Baltimore, Md.	Seattle, Wash.	General.	6,613	6,581	4,795	
Belmore.	25	22 15	26	6 05	26	16 00	26	17 15	American.	Ore S. S. Corp.	550.3	72.2	25.0	Baltimore, Md.	Cruz Grande, Chile	Ballast.	15,476	4,354		
Georgian.	25	20 35	26	6 05	26	16 20	26	17 25	American.	Amer.-Hawaiian Line.	434.3	57.7	18.0	Boston, Mass.	Portland, Ore.	General.	3,430	7,953	5,912	
Capo d'Or.	26	7 05	26	7 45	26	17 13	26	18 25	British.	Canadian Transp. Co.	400.0	52.0	24.0	Galveston, Texas	Vancouver, B. C.	Sulphur, salt.	7,219	5,851	4,284	
Shimoda Maru.	25	4 30	26	8 25	26	18 10	26	19 28	Japanese.	Kokusa Kisen Kaisha.	385.0	51.0	25.1	Boston, Mass.	Nagoya, Japan	(7)	3,312	6,213	4,665	
San Francisco.	26	13 35	26	14 10	26	20 43	26	23 15	American.	Isthmian S. S. Lines	405.0	52.0	26.0	Baltimore, Md.	San Antonio, Chile.	Steel, general.	5,292	6,230	4,432	
Winn.	26	10 40	26	10 40	26	12 22	26	13 24	American.	V. W. Wirt.	48.0	11.6		Cristobal, C. Z.	Gatun, C. Z.	Ballast.	7			
Rollin Stone.	26	10 40	26	10 40	26	12 22	26	13 24	Panamaian	Robert Wilcox.	48.0	11.6		Cristobal, C. Z.	Gatun, C. Z.	Ballast.	7			
Gen. G. W. Coffin.	26	9 20	26	9 20	26	16 15	26	16 15	American.	U. S. Army.	89.0	22.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.	6,265	4,571		
Haxby.	26	16 10	26	18 40	27	11 30	27	13 00	British.	Empire Shipping Co.	421.0	54.0	16.6	Philadelphia, Pa.	Vancouver, B. C.	Ballast.				
Japanese Prince.	27	4 25	27	6 15	27	14 24	27	17 00	British.	Furness, Withy & Co.	441.0	60.0	21.6	New York, N. Y.	Manila, P. I.	General.	3,092	9,240	6,152	
Leannor Law.	27	1 15	27	8 35	27	15 36	27	16 40	British.	Com'th & Dom. Line.	405.0	53.5	16.5	New York, N. Y.	Fremantle, Aust'ln	General.	1,350	6,051	4,637	
Sacramento.	27	9 25	27	10 55	27	17 45	27	19 05	American.	Nelson Line.	390.0	53.0	17.1	New York, N. Y.	San Francisco, Cal.	General.	2,520	5,653	4,122	
Ammon.	27	4 00	27	12 25	27	19 39	27	20 45	German.	Hamburg-American Line.	438.0	55.4	18.5	Hamburg, Germany	Valparaiso, Chile	General.	1,643	7,334	5,221	
William.	27	15 55	27	16 00	27	22 25	27	23 22	American.	Dimon S. S. Corp.	390.0	54.0	21.0	Philadelphia, Pa.	Seattle, Wash.	General.	3,219	6,162	4,433	
Havana Maru.	27	16 00	27	16 10	27	23 42	28	1 15	Japanese.	Osaka Steamship Co.	497.3	50.10	20.6	New York, N. Y.	Shanghai, China.	General.	3,727	6,538	4,769	
Winnon.	27	19 10	27	20 00	28	9 36	28	16 55	British.	Avenue Shipping Co.	375.0	53.6	17.6	New York, N. Y.	Fremantle, Aust'ln	Gen., case oil.	3,912	6,245	4,663	
Stordhus.	27	19 30	27	20 35	28	11 29	28	18 30	British.	Swoll Oil Co.	440.0	59.5	20.0	Newcastle, Eng.	Los Angeles, Calif.	Ballast.	3,912	7,915	4,797	
Redgraven.	27	16 30	28	6 05	28	13 40	29	1 25	Dutch.	Royal Neth. S. S. Co.	400.6	58.6	21.2	Hamburg, Germany.	Corral, Chile.	General.	1,828	7,834	6,018	
S. H. S.	28	6 20	28	14 46	28	14 46	28	14 46	American.	U. S. Navy.	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.				
Almagro.	26	19 30	28	6 05	28	14 52	28	16 00	British.	Pacific Steam Nav. Co.	303.4	43.0	17.7	New York, N. Y.	Tacopilla, Chile.	General.	1,507	2,826	1,770	
Schwaben.	27	13 45	28	7 10	28	16 00	28	16 55	German.	North German Lloyd	471.0	63.2	20.8	Hamburg, Germany	Vancouver, B. C.	General.	3,250	10,002	6,743	
Chicabon.	28	3 25	28	7 25	28	15 50	29	16 20	Danzig.	Standard Oil Co.	490.0	63.2	20.6	Rotterdam, Holland	Talara, Peru	Ballast.	9,248	6,310		
Tucuba.	28	6 20	28	8 25	28	17 41	28	21 50	British.	N. Z. Shipping Co.	467.5	62.0	29.6	Liverpool, England	Auckland, N. Z.	General.	7,312	10,618	7,306	
Steel Exporter.	28	9 10	28	9 15	28	17 50	29	1 25	American.	Isthmian S. S. Lines	424.2	56.2	25.6	Philadelphia, Pa.	Sourabaya, Java.	Steel, general.	8,143	7,611	5,450	
Robin Gray.	28	10 20	28	10 25	28	18 51	29	1 25	American.	Furness-Prince Line.	450.0	58.0	15.0	Baltimore, Md.	Seattle, Wash.	Steel, general.	9,222	7,472	5,542	
Cavaca.	28	13 40	28	14 00	28	22 25	29	2 35	British.	Amer.-Hawaiian Line.	472.3	57.2	18.10	Falmouth, England	Vancouver, B. C.	Ballast.	2,985	8,956	6,562	
Moscona.	28	13 50	28	14 30	28	22 25	29	2 35	American.	Amer.-Hawaiian Line.	472.3	57.2	18.10	Boston, Mass.	Tacoma, Wash.	General.	487	9,258	6,944	
Pulaco.	28	14 10	29	6 00	29	14 27	29	15 35	Chilean.	Chil. Sud. Amer. de Vap.	350.0	51.0	16.3	Greenock, England	San Antonio, Chile	General.	487	5,193	3,528	
Laekenboch.	29	1 35	29	7 05	29	14 55	29	15 55	American.	Laekenboch Line.	471.0	59.2	20.2	Boston, Mass.	Los Angeles, Calif.	General.	2,933	9,027	6,539	
San Felipe.	29	6 00	29	12 00	29	18 29	29	19 50	American.	States S. S. Co.	409.0	51.0	16.8	Philadelphia, Pa.	San Diego, Calif.	General.	2,357	6,521	4,937	
Dacia Arrow.	29	11 20	29	12 35	29	20 12	29	21 34	American.	Standard Oil Co.	468.0	62.7	19.8	Boston, Mass.	Los Angeles, Calif.	Ballast.	9,744	7,140		
Santa Maria.	29	10 35	29	14 30	29	21 00	29	2 15	British.	Grace Line.	466.0	64.0	24.0	New York, N. Y.	Valparaiso, Chile.	General.	2,501	10,626	6,680	
Mabroun.	29	13 20	29	17 35	30	9 20	30	10 20	British.	R. Chapman & Son.	412.0	55.2	16.6	Ellis, N. York.	Vancouver, B. C.	Ballast.			6,823	4,797

* Ammunition and general.

† Phosphates, wheat, and cotton.

‡ Launch.

§ Submarine.

¶ Yacht.

‡ Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Ferrieng 14	26	14 15	26	14 55	26	22 30	27	1 50	Norwegian.	Ferrieng & Eger.	385.3	54.8	25.0	Whyalla, Australia.	New York, N. Y.	Iron ore.	7,312	6,615	4,859
Oreida	26	10 21	26	15 40	27	22 35	27	3 15	American.	Ford Motor Co.	251.0	43.6	20.4	Long Beach, Calif.	Chester, Pa.	(*)	2,825	2,656	1,621
Texas 15	26	6 14	27	6 24	27	15 45	27	15 45	American.	U. S. Navy	565.0	106.0	80.0	Los Angeles, Calif.	New York, N. Y.		5,350	3,924	2,668
Denpark.	27	2 00	27	7 06	27	16 00	27	16 00	British.	J. & J. Dominion, Ltd.	350.0	49.0	21.4	Talalt, Chile	Azores 17	Nitrate of soda.	7,300	6,264	4,681
Ferrieng 14	27	11 30	27	12 18	27	19 13	28	9 15	Norwegian.	Fern Line	366.0	53.8	25.0	Bangkok, Siam.	Geniefuegos, Cuba.	Rice	3,151	5,957	4,325
Santa Elisa	27	12 45	27	13 45	27	20 35	28	9 45	American.	Grace Line	370.0	51.7	23.0	Talcahuano, Chile.	New York, N. Y.	General.	3,015	2,823	1,740
Santa Isabel	14	16 20	27	14 56	27	21 40	27	21 40	American.	American & Cuban Line	251.0	43.6	22.1	San Francisco, Cal.	New York, N. Y.	General.	8,340	7,004	5,017
Iauri.	27	13 35	27	15 21	27	22 30	27	22 30	German.	Ore S. S. Corp.	586.0	82.0	33.5	Talcahuano, Chile.	Hamburg, Germany	Iron ore.	21,650	15,590	4,496
Amerikaland 14	27	14 05	27	16 28	28	13 50	28	13 50	Swedish.	Ore S. S. Corp.	586.0	82.0	33.5	Suz Grande, Chile.	Baltimore, Md.	Gen., passengers.	7,372	25,262	18,194
Pennsylvania 15	27	10 25	28	6 11	28	14 35	28	14 35	American.	Standard Oil Co. of Cal.	425.0	57.2	28.0	San Francisco, Cal.	New York, N. Y.	Gasoline.	8,000	7,481	4,975
S. C. T. Dood 16	28	1 30	28	6 37	28	14 45	28	14 45	American.	Panama Government.	125.6	23.5	13.0	Estero Bay, Calif.	Boston, Mass.		119	1,273	706
Panquaco 16	27	21 40	28	7 06	28	15 35	28	15 45	Panamanian.	Panama Government.	215.7	33.6	13.0	Bahoa, C. Z.	Cristobal, C. Z.	General.	3,854 1/2	12,977	9,373
Acupita	28	4 30	28	7 14	28	15 45	30	10 00	Italian.	Pacific Steam Nav. Co.	509.0	61.8	26.0	Champerico, Guat.	Genoa, Italy.	General.	6,203 1/2	7,145	5,474
Orazo 14	28	13 40	28	7 50	28	16 20	29	3 30	German.	Nord Gen. Italiana Line	409.8	45.3	21.0	Talcahuano, Chile.	Hamburg, Germany	Gen., raw sugar	3,222	3,294	2,356
Carl Legien	27	21 00	28	8 19	28	17 35	28	17 35	German.	Honig & Andersen Line	322.2	45.3	19.0	Corral, Chile.	Bilbao, Spain.	Chickpeas.	5,400	5,349	2,950
Barnbeck	27	21 30	28	9 08	28	19 00	28	20 15	German.	Knorr & Bredend.	355.0	51.6	27.0	Westport, Oreg.	Poughkeepsie, N. Y.	Lumber.	7,133	5,432	4,788
Herman Frasch	28	7 00	28	9 30	28	18 45	28	18 45	American.	Union Sulphur Co.	410.5	54.3	24.4	Westport, Oreg.	Baltimore, Md.	Lumber.	5,510	5,574	4,011
Eleanor	27	22 16	28	10 01	28	19 15	28	19 15	American.	Arrow Line	387.0	52.0	23.0	Pt. Alberni, B. C.	Montreal, Canada.	Lumber.	6,931	8,552	6,236
Christenson.	28	6 00	28	10 31	28	20 40	29	00 05	British.	Golden Sea Ship. Co.	446.0	56.1	29.0	Vancouver, B. C.	Boston, Mass.	General.	8,125	11,060	8,076
Golden Sea	28	6 37	28	10 55	28	21 35	28	21 35	American.	Loekenebach Ship.	465.4	62.2	27.0	Portland, Oreg.	Copenhagen, Den.	General.	9,015	7,717	5,763
K. I.	28	12 45	28	13 30	28	20 30	28	22 00	Danish.	East Asiatic Co.	414.7	52.7	28.0	Vancouver, B. C.	Baltimore, Md.	General.	6,814	7,049	4,941
Loekenebach.	28	13 06	28	14 09	28	22 55	28	22 55	American.	Willis T. S. Corp.	350.0	49.0	22.0	Seattle, Wash.	Boston, Mass.	General.	5,350	3,924	2,668
Amerika 14	28	13 45	28	14 09	28	22 55	29	15 00	British.	American & Cuban Line	422.8	56.2	28.0	Portland, Oreg.	Azores 17	Nitrate of soda.	15,900	11,556	6,772
Yumboro	28	17 30	28	18 19	28	23 35	29	15 35	Chilian.	J. & J. Dominion Line	510.9	68.2	31.0	Antofagasta, Chile.	New York, N. Y.	General.	6,226	11,706	8,320
Kennebunk	28	20 30	29	6 14	29	13 55	29	13 55	British.	Cic. Sud Amer. de Vap.	448.0	58.4	26.0	Valparaiso, Chile.	Hallifax, N. S.	Crude oil.	902	902	902
Chenequak	29	3 00	29	6 44	29	16 50	29	16 50	British.	Imperial Oil Co.	483.0	68.7	26.0	Talcahuano, Chile.	Hampton Rds., Va.	General.	510	510	510
Aconagua	28	20 30	29	7 40	29	15 20	29	15 20	American.	U. S. Navy	483.0	68.7	26.0	San Francisco, Cal.	London, England	General, frozen.	510	510	510
Camadotte 14	28	20 30	29	7 40	29	15 20	29	15 20	British.	Show, Sayill & Albion.	216.5	32.9	12.4	Pt. Chalmers, N. Z.	Cristobal, C. Z.	General.	1,111	6,228	4,491
Chamaouti 14	28	20 30	29	7 40	29	15 20	29	15 20	British.	Rolland Line	400.0	52.4	25.0	Guayaquil, Ecuador	Hallifax, N. S.	General.	7,394	6,864	5,260
Call.	29	4 30	29	8 01	29	18 30	30	00 05	German.	Can. Nat. Steamships	398.1	54.6	28.0	Wellington, N. Z.	Rottterdam, Holland	Lumber, general.	7,642	7,330	5,239
Canadian	29	6 45	29	8 15	29	20 05	1	10 05	British.	Intercean S. S. Corp.	395.5	55.0	23.0	Vancouver, B. C.	London, England	General.	6,118	4,851	3,326
Transporter.	29	10 20	29	10 55	29	20 30	29	20 30	Norwegian.	Isthmian S. S. Line	385.2	51.0	23.0	Seattle, Wash.	Liverpool, England	Crude oil.	6,014	4,107	3,988
Hemmer 14	29	12 55	29	13 21	29	22 30	30	1 00	American.	T. C. Bowering & Co.	400.3	52.2	25.0	Seattle, Wash.	Philadelphia, Pa.	Ballast.	6,700	5,743	4,988
Emley City.	29	12 55	29	13 21	29	22 30	30	1 00	British.	S. H. Smith Sorensen.	400.0	52.2	25.0	La Libertad, Ecua.	Curacao, D. W. I.	General.	8,250	7,093	4,995
El Lobo 1	29	13 30	29	17 55	30	10 45	30	10 45	Norwegian.	Cic. Maritime Belge.	420.0	53.9	26.0	Honolulu, T. H.	Antwerp, Belgium.	Nitrate of soda.	19	19	19
Heron 1	29	18 30	29	19 35	30	13 40	30	13 40	Belgian.	Cic. Maritime Belge.	420.0	53.9	26.0	Antofagasta, Chile.	Azores 17	General.	19	19	19
Pagonnier.	29	22 30	29	6 33	30	13 30	30	15 00	British.	Andrew Weir & Co.	420.0	53.9	26.0	Antofagasta, Chile.	Azores 17	Nitrate of soda.	19	19	19
Spicywan 14	29	22 30	29	6 33	30	13 30	30	15 00	British.	Andrew Weir & Co.	420.0	53.9	26.0	Antofagasta, Chile.	Azores 17	Nitrate of soda.	19	19	19

14 Motor ship. 15 Battleship. 16 Revenue cutter. 17 For orders. 18 Automobile machinery and lumber. 19 Sugar and canned goods.

Point of Origin	29	19	20	30	6	41	10	14	10	30	14	10	American	324	0	45	2	23	0	Portland, Oreg.	New Orleans, La.	
Point Montara	29	19	20	30	6	41	10	14	10	30	14	10	American	324	0	45	2	23	0	Portland, Oreg.	New Orleans, La.	
Lady Lewis	29	20	45	30	8	15	30	15	30	15	30	15	American	424	8	52	2	23	0	Portland, Oreg.	Philadelphia, Pa.	
Rosby	29	21	50	30	8	15	30	15	30	15	30	15	British	400	6	52	3	26	0	Portland, Oreg.	Philadelphia, Pa.	
Dinteldijk	30	00	15	30	8	54	30	18	00	30	21	45	Dutch	485	6	62	0	29	0	Victoria, B. C.	United Kingdom	
Julia	29	23	50	30	9	16	30	16	55	30	16	55	American	436	6	57	2	25	0	Portland, Oreg.	Mobile, Ala.	
Onondaga	30	1	30	30	10	13	30	18	05	30	18	05	American	251	0	43	9	38	0	Portland, Oreg.	Philadelphia, Pa.	
Peter Kerr	30	12	05	30	13	02	30	20	30	22	50	American	415	0	55	7	29	0	Vancouver, B. C.	London, England		
Vulcan City	29	14	50	30	15	16	30	23	10	British	420	4	54	5	26	2	Portland, Oreg.	Cobh, Ireland				
Susan Y.	30	19	30	30	20	19	31	10	45	31	10	45	American	434	5	57	7	26	0	Seattle, Wash.	New York, N. Y.	
Lukenbach	30	20	30	31	6	12	31	14	05	31	14	05	French	425	0	57	0	25	0	Los Angeles, Calif.	United Kingdom	
Myrina	31	2	20	31	6	48	31	14	25	31	14	25	Swedish	378	0	54	0	26	0	Vancouver, B. C.	London, England	
Boren	31	2	20	31	7	26	31	15	00	French	425	0	55	0	26	0	Portland, Oreg.	Le Havre, France				
Alaska	31	5	20	31	7	56	31	15	30	17	40	American	440	0	56	0	28	0	Portland, Oreg.	Baltimore, Md.		
Hegra	31	5	20	31	7	56	31	15	30	17	40	American	445	1	59	8	25	5	Seattle, Wash.	Boston, Mass.		
California	31	9	30	31	10	11	31	17	20	31	17	20	American	356	7	41	9	19	0	San Francisco, Calif.	Cristobal, C. Z.	
Suriname	31	9	55	31	10	42	31	18	15	American	470	2	62	0	18	0	Puntarenas, C. R.	Chesler, Pa.				
Kirkliston	31	10	30	31	10	49	31	18	10	31	18	10	British	483	6	42	0	18	0	Los Angeles, Calif.	London, England	
Langanger	31	6	30	31	11	05	31	19	15	31	19	15	Norwegian	470	2	62	0	18	0	Los Angeles, Calif.	London, England	
Oak Branch	31	17	15	31	13	34	31	20	35	31	23	15	British	411	9	55	0	21	0	Corral, Chile	Liverpool, England	
Wobbia	31	13	40	31	14	21	31	21	45	31	21	45	British	385	0	61	0	26	0	Los Angeles, Calif.	Hamburg, Germany	
Wabich	31	17	20	31	6	48	31	13	50	31	15	10	American	435	0	56	0	26	0	Los Angeles, Calif.	New York, N. Y.	
Schwarz	31	14	15	31	7	02	31	15	10	31	15	10	American	400	6	53	3	26	0	Falcahuano, Chile	Hamburg, Germany	
Dilworth	31	21	45	31	7	25	31	15	50	31	23	32	Dutch	380	3	53	1	23	0	Wilapa Har., Wash.	New York, N. Y.	
Bostrop	31	21	45	31	7	25	31	15	50	31	23	32	Dutch	380	3	53	1	23	0	Wilapa Har., Wash.	New York, N. Y.	
Nelson	31	2	40	31	8	28	31	16	30	31	16	30	American	261	8	41	2	14	2	Callao, Peru	London, England	
Traveler	31	2	40	31	8	28	31	16	30	31	16	30	American	261	8	41	2	14	2	Callao, Peru	London, England	
Cid	31	6	00	31	9	53	31	17	40	31	18	40	British	412	1	55	0	25	0	Portland, Oreg.	Philadelphia, Pa.	
Cross	31	21	45	31	10	17	31	18	25	31	18	25	American	409	5	54	2	24	0	Portland, Oreg.	Baltimore, Md.	
San Rafael	31	11	14	31	13	45	31	22	00	31	22	00	American	473	4	59	8	26	0	Vancouver, B. C.	Le Havre, France	
West Cape	31	12	35	31	13	52	31	21	50	31	21	50	French	473	4	59	8	26	0	Vancouver, B. C.	Le Havre, France	
Wilmington	31	14	00	31	14	09	31	2	10	Swedish	407	0	52	3	26	0	Tocopilla, Chile	Stockholm, Sweden				
Balboa	31	14	45	31	15	39	31	2	11	25	31	12	15	British	400	4	52	3	26	0	Tocopilla, Chile	Azores
Beepark	31	14	45	31	15	39	31	2	11	25	31	12	15	British	400	4	52	3	26	0	Tocopilla, Chile	Azores
Maria	31	26	7	13	26	American	37	0	9	5	Balboa, C. Z.	Cristobal, C. Z.										

* Tanker. * Launch. * Lumber, paper, and pulp. All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Date	Vessel	Line	Front	Date	Vessel	Line	For
October 26	Ulua	United Fruit Co.	Port Limon, Costa Rica.	October 26	No. 303-N	Pan American-Grace Airways	Talara via waypoints
October 26	No. 945-M	Pan American-Grace Airways	Talara via waypoints.	October 26	No. 9685	Pan American Airways	Salvador and waypoints.
October 26	Esther Thorden	Aluminum Line	Houston via waypoints.	October 26	Ulua	United Fruit Co.	New York via Habana.
October 27	Van Rensselaer	Royal Netherlands S. S. Co.	Hamburg via waypoints.	October 28	Daytonian	Aluminum Line	Port Limon, Costa Rica.
October 27	Cadames	United Fruit Co.	New York via Habana.	October 28	Esther Thorden	Aluminum Line	Paranaribo and waypoints.
October 27	Cardoba C-40	Seattle Airplane Co.	Barnaquilla and waypoints.	October 28	Oreino	Hamburg-American Line	Port Limon, Costa Rica.
October 27	No. 9088	Pan American Airways	Salvador and waypoints.	October 28	Cristobal	Panama R. R. S. S. Line	New York via Haiti.

* Other than ships passing through the Canal.

* ARRIVALS. * DEPARTURES.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
October 28.	Orinoco	Hamburg-American Line	Hamburg via wayports.	October 28.	Van Rensselaer	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
October 28.	No. 300-N ²³	United Fruit Co.	Talara via wayports.	October 29.	Calamares	United Fruit Co.	Port Limon, Costa Rica.
October 29.	Zacapa	United Fruit Co.	New York via Kingston.	October 29.	No. 9688 ²¹	Pan American Airways	Salvador and wayports.
October 29.	Buenos Aires	Spanish S. S. Line	New Orleans, La.	October 29.	No. 9137 ²¹	Pan American Airways	Miami via wayports.
October 29.	Switzerland	C. D. Mallory & Co.	Barecelona and wayports.	October 30.	No. 379-N ²³	Pan American Airways	Curacao via wayports.
October 29.	No. 9688 ²¹	Pan American Airways	Curacao, D. W. I.	October 30.	Irona	United Fruit Co.	New York via wayports.
October 29.	No. 142-M ²³	Pan American Airways	San Salvador and waypts.	October 31.	Buenos Aires	United Fruit Co.	Port Limon, Costa Rica.
October 29.	Clenden	United Fruit Co.	Miami via wayports.	October 31.	Flandre	Spanish Line	Barecelona via wayports.
October 30.	Flandre	French Line	Curacao, D. W. I.	October 31.	Switzerland	C. D. Mallory & Co.	Curacao, D. W. I.
October 30.	Van Rensselaer	Royal Netherlands S. S. Co.	Havre via wayports.	October 31.	No. 9670 ²¹	Pan American Airways	San Salvador and waypts.
October 31.	Anapala	Standard Fruit & S. S. Co.	Port Limon, Costa Rica.	October 31.	Corlova C-40 ²¹	Seadta Airplane Co	Barranquilla and waypts.
October 31.	Dungannon	The Texas Co.	New Orleans and Habana.	October 31.	Inapaquina	United Fruit Co.	Colon, Rep. of Panama.
October 31.	Anahuacina ²⁴	Leyland S. S. Line	Port Arthur, Tex.	November 1	Camden	A. Tagaropoulos	Colon, Rep. of Panama.
October 31.	Amueda I. ²⁴	United Fruit Co.	Port Limon, Costa Rica.	November 1	Dayronian	Leyland S. S. Line.	Curacao, D. W. I.
October 31.	Inapaquina ²⁴	Hamburg-American Line	Colon, Rep. of Panama.	November 1	Irona	United Fruit Co.	Santa Marta, Colombia.
November 1	Orinoco	United Fruit Co.	Colon, Rep. of Panama.	November 1	Anapala	Standard Fruit & S. S. Co.	New Orleans and waypts.
November 1	No. 300-N ²³	Hamburg-American Line	Port Limon, Costa Rica.	November 1	Van Rensselaer	Royal Netherlands S. S. Co.	New Orleans and waypts.
November 1	No. 9127 ²³	Pan American Airways	La Guayra via wayports.				Amsterdam and waypts.
November 1	No. 945-M ²³	Pan American Airways	Miami via wayports.				
November 1	No. 9488 ²³	Pan American Airways	Talaga via wayports.				
November 1	No. 300-N ²³	Pan American Airways	San Salvador and waypts.				
			Talara via wayports.				

²³ Air mail carrier. ²⁴ Motor boat.

PORT OF BALBOA.

October 19.	Sapelo ¹	U. S. Navy.	Los Angeles, Calif.	October 26.	La Placencia ¹	Union Oil Co.	Los Angeles, Calif.
October 31.	Nueva Panama ²⁵	Hans Elliot.	Panama Bay, R. P.	November 1	Sapelo ¹	U. S. Navy.	Los Angeles, Calif.
October 31.	Real ²⁶	Des Hermanos ²⁶	Panama Bay, R. P.	November 1	Nueva Panama ²⁵	Hans Elliot.	Panama Bay, R. P.
October 31.	Roma ²⁶	A. Valdez.	Panama Bay, R. P.	November 1	Real ²⁶	Hans Elliot.	Panama Bay, R. P.
October 31.	El Libertador ²⁶	A. Valdez.	Panama Bay, R. P.	October 31	Des Hermanos ²⁶	A. Valdez.	Panama Bay, R. P.
November 1	Maipo ¹	Chilean Government.	Artica, Chile.	October 31	Roma ²⁶	A. Valdez.	Panama Bay, R. P.
				October 31.	El Libertador ²⁶	A. Valdez.	Panama Bay, R. P.

¹ Tanker. ²⁵ Motor ship. ²⁶ Motor schooner. * Other than ships passing through the Canal.

Census of the Canal Zone.

The Act of Congress providing for the fifteenth and subsequent decennial censuses directed that a census of the Panama Canal Zone be taken by the Governor of the Canal Zone, in accordance with plans prescribed or approved by the Director of the Census. This was done, as of April 1, 1930. The total population was 39,469. The enumeration included members of the Army and Navy forces and all other people living in the Canal Zone but did not include Americans or any others whose usual place of abode was within the Republic of Panama. The personnel of the Army and Navy, exclusive of civilian residents attached to them, was: Army, 8,686; Navy, 1,194; total, 9,880. The civil population was 29,589.

Of the total population, 22,199 were in the Balboa Division and 17,270 in the Cristobal Division. The areas of these divisions are those of the court divisions or magisterial districts.

The boundaries of each town or village and military or naval reservation were defined precisely, and the remaining areas, sparsely inhabited, were defined and designated as rural areas. The enumeration areas in the Balboa Division were numbered 1 to 24, inclusive, and those in the Cristobal Division were 25 to 47, inclusive.

The census sheets were forwarded to the Bureau of the Census with the report of the enumeration but prior to their forwarding the Bureau of Statistics of the Canal recorded the major data on tabulating cards, for the preparation of statistics to be used primarily for school and health work. The tables presented herewith were compiled from the cards.

The population of the 47 enumeration areas by color (white, black, and all others, the latter principally Indian, mestizo, Chinese) and sex was as follows:

Area number.	Name of Area.	White.		Black.		All other.		Total population.
		Male.	Female.	Male.	Female.	Male.	Female.	
1	Ancon.....	706	745	104	62	7	5	1,629
2	Balboa Heights.....	171	164	8	14			357
3	Quarry Heights.....	286	115	2	18			421
4	Balboa.....	1,658.	1,341	114	79	6	1	3,199
5	La Boca.....	36	18	1,645	1,506	20	3	3,228
6	Palo Seco.....	2	1	80	31	1		115
7	Balboa Naval reservation.....	34	13					47
8	Fort Amador.....	1,256	138		3	26		1,423
9	Corozal.....	1,436	178	18	13			1,645
10	Corozal Hospital for Insane.....	79	82	319	216	13	3	712
11	Fort Clayton.....	1,648	114	3	26			1,791
12	Miraflores.....	14	2	20	10			46
13	Red Tank.....	12	3	1,243	1,019	20	10	2,307
14	Pedro Miguel.....	412	361	22	26			821
15	Rural, East Side.....	8	3	322	244	141	110	828
16	Paraiso.....	37	4	692	597	6	2	1,338
17	Summit.....	4		28	20	21	9	82
18	Gamboa Prison.....	46	6	42		7		101
19	South Gamboa.....	1		91	88	11	11	202
20	Rural, East Side.....	84	4	220	64	208	23	603
21	Alhajuela Area.....	34		93	7	170	33	337
22	Las Cascadas.....	8	8	124	130	3		273
23	Rural, West Side.....	1		103	84			188
24	Rural, West Side.....	8	2	271	21	2	2	506
25	North Gamboa.....	14	8	8	11	6	3	50
26	Rural, East Side.....	3		162	82	95	62	404
27	Darien.....	25	10	13	10			58
28	Frijoles.....	1	1	70	52			127
29	Rural, East Side.....	3	2	197	149	3	1	354
30	Monte Lirio.....	3		13	9			25
31	Rural, East Side.....	3		57	39	1	1	101
32	Rural, West Side.....	2	2	59	50			113
33	Rural, West Side.....	13	6	337	212	2		570
34	Rural, West Side.....	10	2	373	139			524
35	Fort Sherman.....	649	90	14	12	1		766
36	Gatun.....	284	269	941	829	14	1	2,398
37	Fort Davis.....	2,321	225	29	58	17	3	2,653

Area number.	Name of Area.	White.		Black.		All other.		Total population.
		Male.	Female.	Male.	Female.	Male.	Female.	
38	Colon Radio Station.....	11	3					14
39	Rural, East Side.....	8	3	183	91	6		291
40	Mount Hope.....	10	7		2	7	2	28
41	Silver City.....	1		2,335	2,123	1		4,460
42	Camp Bied.....	28	2	430	264	59		783
43	Cristobal.....	450	163	17	11	3		644
44	France Field.....	801	108	1	32			942
45	Coco Solo.....	1,077	78	10	3	28		1,196
46	Fort Randolph.....	599	48	4	19			670
47	Fort De Lesseps.....	134	23				2	159
	Total.....	14,431	4,352	10,817	8,675	907	287	39,469

Ages.—The following is a segregation by ages, color, and sex:

Age in years.	White.		Black.		All others.		Total.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
0-3.....	294	276	726	736	55	37	1,075	1,049
4.....	92	67	207	205	16	7	315	279
5.....	86	78	242	232	12	10	340	320
6.....	97	75	249	240	13	3	359	318
7.....	95	99	253	257	21	7	369	363
8.....	100	103	277	261	7	12	384	376
9.....	100	103	282	290	4	8	386	401
10.....	90	85	316	282	6	5	412	372
11.....	75	77	263	255	5	8	343	340
12.....	94	85	276	279	7	3	377	367
13.....	76	70	274	255	4	3	354	328
14.....	66	57	240	248	3	4	309	309
15.....	77	71	212	264	7	4	296	339
16.....	76	67	224	236	10	4	310	307
17.....	66	60	200	229	13	5	279	294
18.....	383	70	182	170	12	4	577	244
19.....	624	58	195	173	14	1	833	232
20.....	693	58	146	137	41	8	880	203
21.....	947	52	116	86	28	3	1,091	141
22-34.....	6,851	1,146	1,271	1,380	354	74	8,476	2,600
35-44.....	1,988	909	2,382	1,408	172	47	4,542	2,364
45 and over.....	1,461	686	2,264	1,051	103	30	3,828	1,767
Unknown.....			20	1			20	1
Total.....	14,431	4,352	10,817	8,675	907	287	26,155	13,314

School attendance.—Those who had attended school at any time since September 1, 1929, were as follows: White, 2,004; black, 4,842; all others, 60; total, 6,896.

Literacy (ability to read and write in any language) and *ability to speak English* among those who were 10 years of age or over are summarized as follows:

Race.	Persons 10 years of age or over.	Literate.	Percentage of literacy.	Able to speak English.	Percentage.
White.....	17,118	16,979	99.19	16,832	98.33
Black.....	15,035	12,607	83.85	12,182	81.02
All others.....	982	511	52.04	254	25.87
Total.....	33,135	30,097	90.83	29,268	88.33

Families.—Using the term "family" as defined in the census rules, the numbers of persons who are heads of families are as follows, segregated by age groups and races:

	White.		Black.		All others.		Total.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Below 21.....	2	1	10	2	1		13	3
21-34 inclusive.....	539	13	370		42	3	951	16
35-44 inclusive.....	826	19	1,419	33	48		2,293	52
45 and over.....	836	16	1,245	26	32	1	2,113	43
Total.....	2,203	49	3,044	61	123	4	5,370	114

The size of families is shown in the following table, the family consisting of the head and those living with him:

Number in family.	Number of families.			
	White.	Black.	All others.	Total.
1	11	3		14
2	740	577	30	1,347
3	559	514	21	1,094
4	448	436	25	909
5	251	380	19	650
6	133	369	13	515
7	65	297	10	372
8	35	240	4	279
9	6	153	5	164
10	4	85		89
11		29		29
12		10		10
13		8		8
14		2		2
15		2		2
Total	2,252	3,105	127	5,484

Place of birth of Canal Zone residents is shown as follows:

	Canal Zone.	U. S. and possessions other than C. Z.	West Indies.	Panama.	Colombia.	All other places.
White	1,111	15,271	118	580	76	1,627
Black	5,017	85	8,043	5,454	586	3,077
All others	110	46	43	724	101	170
Total	6,238	15,402	8,204	6,758	763	21,144

The year of immigration to the Canal Zone (or United States), when shown, is as follows. This implies to people whose birthplace was neither the Canal Zone nor the United States:

	White.		Black.		All others.		Total.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Before 1914	720	248	4,098	2,268	89	19	4,907	2,535
1914 to 1928	618	339	3,365	3,382	374	162	4,357	3,883
1929 and 1930	115	52	682	490	373	55	1,170	597
Total	1,453	639	8,145	6,140	836	236	10,434	7,015

Occupations.—Residents employed in a gainful occupation are segregated by occupation, as follows:

Occupation.	White.		Black.		All others.	
	Male.	Female.	Male.	Female.	Male.	Female.
Army commissioned personnel	365					
Army noncommissioned personnel	42					
Army other enlisted personnel	8,253		19		7	
Navy commissioned personnel	80					
Navy noncommissioned personnel	9					
Navy other enlisted personnel	1,066		10		29	
Accounting group	61	4	4			
Artisans	2		33		7	
Blacksmith group	12		23		3	
Boilermaker group	81		10			
Building trades group	17		65		3	
Carpenter and woodworking group	81		307		13	
Electrical employees	177		49		3	
Machinists group	301		102			
Painters	17		111			
Plumbing and steamfitting group	34	1	56			
Sheetmetal worker group	12		10			
Miscellaneous metal trades	57		9			
Attendants, hospital	1		37	4		
Barber group	12	6	1			
Cash accounting employees	18	14	3		1	
Courts employees	7					
Engineering group, professional	63					

Occupation.	White.		Black.		All others.	
	Male.	Female.	Male.	Female.	Male.	Female.
Engineering group, subprofessional	39	1	29			
Operators of office devices	3	20				
Stenographic and typist group	12	69	14	3		
General clerical employees	390	113	167	12	4	1
Operator group, coaling plant	18		1			
Coal handlers			34			
Community workers	30	2	10	2		
Crane and steamshovel group	16		16			
Customs employees group	13		1			
Domestic servant group	18	28	41	655	5	16
Educational group	25	74	58	25		1
Enginemen and firemen, stationary	88		100	1	2	
Farming group	34	2	1,350	30	176	5
Licensed employees on floating equipment	148		32	1	1	
Unlicensed employees on floating equipment	105	1	491	1	24	
Hotel and hospital service	13		124	9	20	3
Foremen, not included with employees supervised	158	2	72		14	
Helpers, mechanical trades	21		398	1	19	
Janitor group	3	1	135	3	3	
Laborer group	87		1,060	8	338	
Messenger group	1		70	1	1	
Miscellaneous semiskilled labor	30	5	205	13	18	
Laundry worker group	36		31	14		
Library group	1	6				
Lock employees group	72		99		1	
Medical group, professional	75					
Medical group, subprofessional	49	115	9	4		
Motor and animal transportation group	50		97	1	4	
Police and fire protection group	174		113		6	
Postal employees group	34	3	5	1		
Power plant and pumping plant employees	35	1	39		4	
Panama Railroad employees, miscellaneous	79	1	64		3	
Printing trades employees	1		16	1		
Property accounting group	13		1			
Storekeeper group	16	1	54		2	
Commissary group	65	41	187	13	12	1
Cargo handling employees	9		189		1	
Telephone employees	11	8	10	3	1	
Supervisory and administrative employees	9					
Steamship agent group	15	3	1		3	

Industries.—The distribution of persons employed among the various industries and organizations operating on the Canal Zone, is tabulated as follows:

Industry or organization.	White.		Black.		All others.	
	Male.	Female.	Male.	Female.	Male.	Female.
United States Army	8,723	24	67	9	34	
United States Navy	1,184	5	22		30	
Accounting Department	117	63	5	1	2	
Cattle industry	7		106		8	
Coaling plants	16		153			
Commissary Division	99	43	317	29	3	
Constructing Quartermaster	70	1	249			
Courts	9		2			
Dredging Division	201	2	494	1	62	
Electrical Division	120	8	98	1	29	
Executive Department	328	101	197	10		1
Fortifications Division	21	2	24			
Health Department	122	133	178	32	4	
Lock Operation	244	3	435		4	
Madden Dam Project	113		91		60	
Marine Division	139	2	240	1	1	1
Mechanical Division	464	9	291	1	3	
Municipal Division	66	2	247		14	
Operation and Maintenance, general			148			
Gatun Dam and backfills	5		56			
Office Engineer section	14		6			
Section of Surveys	46	1	25		7	
Panama Railroad	104	4	226	5	181	
Receiving & Forwarding Agency	41		437		65	
Supply Department	166	15	450	4	5	
Panama Canal and Panama R. R. unspecified	3		1			
Steamship agencies and allied interests	122	9	15		4	
Welfare organizations	22	4	7	1	1	
Group catering to personal needs	3		20	10		2
Private family employment	20	37	101	618	8	16
Miscellaneous business	151	53	1,436	82	196	7
Unspecified	24		33		5	

Unemployment among residents is shown as follows:

	White.		Black.		All others.		Total.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Number of persons who usually work at a gainful occupation.....	12,763	523	6,118	789	724	27	19,605	1,339
Number of above out of a job.....	29	3	31	1	3	1	63	5

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 4, 1930.

No. 790.

Caribbean Sea, Serrana Bank, Southwest Cay, light reexhibited. A radiogram from the U. S. lighthouse tender *Acacia* reports the following:

Serrana Bank light, Caribbean Sea, relighted November 1, 1930. Approximate position: Lat. 14° 16' 40" N., long. 80° 23' 50" W.

NOTE.—This light reported extinguished in Notice to Mariners No. 772, Balboa Heights, October 6, 1930, and No. 789, November 1, 1930.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 4, 1930.

No. 791.

Panama, west coast, Morro Puercos, light established. An unwatched flashing white light was established November 2, 1930, on the southeasternmost point of Morro Puercos, R. P.

Position: Latitude 7° 14' 27" N., longitude 80° 25' 00" W. Characteristics: Flashing white; period 5.0 seconds, flash 0.5 second, eclipse 4.5 seconds; 12 flashes per minute. Visibility, 20 miles.

Description: Pyramidal lattice work steel tower 50 feet high, painted white on two sides. Height of focal plane 275 feet above mean high water.

H. BURGESS,
Governor.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective October 27, 1930.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb.	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulfridon Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulfridon No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulfridon, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.12
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

**Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Cristobal, C. Z., for Week Ending October 25, 1930.**

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Pastores.....	United Fruit Co.....	October 19.....	October 19.....	7	301
Escapa Fuego.....	Sturgeon Brothers.....	October 19.....	October 22.....	2	(²)
Cerigo.....	Hamburg-American Line.....	October 19.....	October 25.....	765	144
Caldas.....	National Navigation Co.....	October 19.....	October 25.....	190	145
Panama.....	United Fruit Co.....	October 20.....	October 20.....	112	(²)
Guatemala.....	Panama Mail S. S. Co.....	October 20.....	October 21.....	258	508
Haarlem.....	Royal Netherlands S. S. Co.....	October 20.....	October 21.....	5	25
Minden.....	North German Lloyd.....	October 20.....	October 21.....	77	232
Parana.....	Pacific Steam Navigation Co.....	October 20.....	October 22.....	386	12
Ulua.....	United Fruit Co.....	October 20.....	October 22.....	549	24
City of Panama.....	Panama Mail S. S. Co.....	October 20.....	October 25.....	434	1,340
Salvador.....	Pacific Steam Navigation Co.....	October 21.....	October 21.....	55	.....
Konigsberg.....	North German Lloyd.....	October 21.....	October 21.....	291	14
Santa Teresa.....	Grace Line.....	October 21.....	October 21.....	88	42
San Vicente.....	Pacific-Atlantic Line.....	October 21.....	October 22.....	126	4
Pacific Grove.....	Furness, Withy & Co.....	October 21.....	October 24.....	(¹)	620
Carare.....	United Fruit Co.....	October 22.....	October 22.....	4	(²)
Kuma Maru.....	Nippon Yusen Kaisha.....	October 22.....	October 22.....	114	(²)
Sixaola.....	United Fruit Co.....	October 22.....	October 23.....	333	262
Colombia.....	Panama Mail S. S. Co.....	October 22.....	October 23.....	217	341
Illinois.....	French Line.....	October 22.....	October 23.....	101	35
Teutonia.....	Hamburg-American Line.....	October 22.....	October 23.....	86	8
Wido.....	North German Lloyd.....	October 22.....	October 23.....	373	104
Tela.....	United Fruit Co.....	October 22.....	October 23.....	1,154	65
Orduna.....	Pacific Steam Navigation Co.....	October 22.....	October 23.....	173	211
Cristobal.....	Panama R. R. S. S. Line.....	October 23.....	October 23.....	2,450	.....
Daytonia.....	Leyland S. S. Line.....	October 23.....	October 23.....	410	.....
Wisconsin.....	French Line.....	October 23.....	October 23.....	36	79
San Francisco.....	Isthmian S. S. Lines.....	October 23.....	October 24.....	51	75
Bolivar.....	United Fruit Co.....	October 23.....	October 24.....	6	244
Nosa Chief.....	N. O. & S. A. S. S. Co.....	October 23.....	October 24.....	361	152
Teno.....	Chilean S. S. Line.....	October 23.....	October 24.....	(¹)	6
Baralt.....	Royal Netherlands S. S. Co.....	October 24.....	October 24.....	574	66
Montevideo Maru.....	Osaka Shosen Kaisha.....	October 24.....	October 24.....	25	1
Orcoma.....	Pacific Steam Navigation Co.....	October 24.....	October 24.....	5	2
San Mateo.....	United Fruit Co.....	October 24.....	October 25.....	691	(²)
Arizona.....	French Line.....	October 24.....	October 25.....	98	99
Atlantida.....	Standard Fruit & S. S. Co.....	October 24.....	October 25.....	125	371
Pearl Marie.....	Peullebois.....	October 24.....	October 25.....	(¹)	30
Rialto.....	Nav. Libera-Triestina.....	October 25.....	October 25.....	(¹)	.....
Tela.....	United Fruit Co.....	October 25.....	October 25.....	74	260
Tai Ping.....	Barber Line.....	October 25.....	October 25.....	150	9
Santa Barbara.....	Grace Line.....	October 25.....	October 25.....	2	210

* No cargo discharged.

* No cargo laded.

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1930 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
Ancon.....	October 28...	November 2..	November 5..	November 9..	November 12.	November 17.
Cristobal.....	November 11.	November 16.	November 19.	November 23.	November 26.	December 1.
Ancon.....	November 25.	November 30.	December 3..	December 7..	December 10..	December 15.
Cristobal.....	December 9..	December 14..	December 17..	December 21..	December 24..	December 29.
Ancon.....	December 23..	December 28..	December 31..	January 4....	January 7....	January 12.

Steamers sail at 4 p. m. from pier 65, North River, Foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., November 12, 1930. No. 15.

Comparison of Canal Traffic in October, 1930, with October Traffic in Previous Years.

The commercial traffic through the Panama Canal during the month of October, 1930, showed approximately a 12 per cent increase over the previous month, but was appreciably less than in October in the three preceding years, 1927, 1928, and 1929, with respect to transits and cargo.

In comparison with the traffic in October, 1929, the 517 transits in October, 1930, are fewer by 47, or 8.3 per cent, than the 564 transits in October of last year, while the net tonnage (Panama Canal measurement), aggregating 2,584,160, was less by 165,789 tons, or 6 per cent, than the total of 2,749,949 tons in October, 1929. The cargo tonnage of 2,394,410 for October, 1930, shows a decline of 451,233 tons, or 15.9 per cent, from the total of 2,845,643 tons passing through the Canal in October, 1929.

In the tabulation below are shown the number of transits, net tonnage (Panama Canal measurement), and the tons of cargo carried through the Canal during the month of October each year from 1914 to 1930, inclusive, and for comparison, the monthly averages for the corresponding fiscal year ending on June 30th following:

Calendar year.	Month of October.			Fiscal year.	Average per month for fiscal year.		
	Commercial transits.	Panama Canal net tonnage.	Tons of cargo.		Commercial transits.	Panama Canal net tonnage.	Tons of cargo.
1914.....	83	322,074	425,095	1915.....	102	361,197	465,567
1915.....	(¹)			1916.....	63	199,687	257,843
1916.....	155	482,532	616,848	1917.....	150	483,213	588,213
1917.....	171	522,712	601,392	1918.....	172	547,839	627,669
1918.....	190	552,725	657,597	1919.....	169	510,416	576,385
1919.....	196	670,100	705,881	1920.....	206	712,170	781,208
1920.....	238	935,579	991,066	1921.....	241	951,323	966,601
1921.....	255	1,069,554	985,775	1922.....	228	951,455	907,075
1922.....	294	1,310,392	1,445,863	1923.....	331	1,550,482	1,630,656
1923.....	427	2,139,475	2,127,567	1924.....	436	2,179,073	2,249,559
1924.....	393	1,923,950	2,017,980	1925.....	389	1,904,596	1,996,570
1925.....	410	1,955,485	2,009,171	1926.....	433	2,064,549	2,169,787
1926.....	445	2,124,519	2,374,711	1927.....	456	2,185,651	2,312,351
1927.....	567	2,585,752	2,717,646	1928.....	538	2,454,886	2,469,226
1928.....	557	2,515,380	2,582,477	1929.....	534	2,468,483	2,555,250
1929.....	564	2,749,949	2,845,643	1930.....	515	2,498,385	2,502,519
1930.....	517	2,584,160	2,394,410	(⁴).....	491	2,441,576	2,341,786

¹ Canal opened August 15, 1914.

² Average for 10½ months of fiscal year ended June 30, 1915.

³ Canal closed on account of slides.

⁴ Average first 10 months calendar year 1930.

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MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, November 8, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Dio.	1	18 35	2	6 10	2	13 35	2	14 35	American	Redwood Line.	331.0	52.2	25.2	Houston, Texas	Seattle, Wash.	Sulphur, general.	5,428	5,708	4,131
Sidney M. Hauptman.	2	3 30	2	7 30	2	14 28	2	15 25	American	Munson, McCorkle Line	401.0	53.2	19.6	Baltimore, Md	Tacoma, Wash.	Steel, general.	4,345	7,082	5,167
Chas. H. Cramp.	2	11 35	2	11 45	2	18 15	2	19 25	American	Aronson S. S. Co	404.0	53.0	28.0	Baltimore, Md	Vancouver, B. C.	Steel, general.	6,819	6,755	4,750
Bores.	1	17 30	2	12 45	3	23 56	3	23 56	Norwegian.	Newfield-Can. S.S. Co	245.0	38.0	16.3	St. Pierre, Fr. Colly	Shanghai, China.	Whisky	650	1,557	972
Mallard.	3	00 45	3	6 15	3	13 33	3	14 15	American	U. S. Navy	180.0	35.6		Gatun, Lake, C. Z.	Balboa, C. Z.	Ballast			
Pat Doherty.	3	00 45	3	6 25	3	13 01	3	15 10	American	Richfield Oil Co	430.0	49.0	19.0	New York, N. Y.	Los Angeles, Calif	Ballast.	2,773	5,634	5,634
Marsodali.	3	4 25	3	6 25	3	13 48	3	15 10	American	Nelson Line	324.0	46.2	20.0	Baltimore, Md	Seattle, Wash.	General.	2,280	3,984	2,928
Swan.	3	4 25	3	6 35	3	15 00	3	15 00	American	U. S. Navy	180.0	35.6		Cristobal, C. Z.	Balboa, C. Z.	Towing barge.			
Triumph.	3	5 45	3	7 25	3	14 10	4	3 30	American	Roosevelt S. S. Co., S.B.	455.0	56.0	22.7	Dayao, P. I.	Dayao, P. I.	General.	5,938	8,278	5,839
Svealand.	3	6 05	3	7 50	3	16 05	3	21 20	Swedish	Ore S. S. Corp	561.0	72.2	23.6	Spartaxos Pt., Md.	Cruz Grande, Chile	Ballast.			
S-12.	3	6 05	3	8 25	3	16 08	3	21 20	American	U. S. Navy	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			15,425
S-13.	3	8 25	3	8 25	3	16 08	3	16 08	American	U. S. Navy	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
George Washington.	3	10 33	3	11 20	3	17 30	3	18 40	Norwegian.	Fred Olsen & Co.	425.5	55.3	16.4	Antwerp, Belgium.	Vancouver, B. C.	Iron, general.	1,867	7,553	5,673
Creole.	1	1 00	3	13 50	3	20 43	3	20 43	Venezuelan	Creole Petroleum Co.	325.0	55.0	10.0	Curacao, N. W. I.	Balboa, C. Z.	Ballast.			
St. Michel.	3	1 35	4	6 00	4	13 18	4	14 07	American	U. S. Army	436.0	58.0	24.3	Brooklyn, N. Y.	San Francisco, Cal.	General.	207		
Sham.	4	6 05	4	7 15	4	14 22	4	21 05	Danish	East Asiatic Co	410.0	55.0	18.6	Copenhagen, Den.	Vancouver, B. C.	General.	3,776	7,068	5,303
Santa Rita.	3	15 28	4	9 05	4	15 20	4	23 12	American	Grace Line	370.0	53.2	21.0	New York, N. Y.	Talcahuano, Chile	General.	1,428	6,255	4,099
El Salvador.	3	5 00	4	9 00	4	15 13	5	17 15	American	Panama Mail S. S. Co.	360.0	32.0	21.7	New York, N. Y.	San Francisco, Cal.	General.	1,723	5,710	4,011
Empire.	4	9 00	4	9 55	4	16 36	4	21 05	American	Standard Oil Co	468.3	63.0	21.0	Portland, Me.	Los Angeles, Calif	Ballast.			9,841
Arrow.	4	11 22	4	11 35	4	18 11	4	19 10	British	Royal Mail S. P. Co.	375.0	48.0	17.0	Newport, England	San Francisco, Cal.	General.			4,906
Cherry.	4	10 10	4	12 00	4	19 18	4	20 45	British	F. & W. Ritson	400.5	51.9	20.0	Liverpool, England	Corral, Chile.	General.	3,425	5,403	3,960
Branch.	4	11 58	4	13 25	4	20 25	4	21 30	American	Loeknebach Line	425.0	57.3	26.0	Houston, Tex	Tacoma, Wash.	General.	6,172	8,568	6,645
Edgar F. Locknebach.	3	22 45	4	14 30	4	22 32	4	23 12	American	Bank Line, Ltd.	426.7	57.4	23.0	Wilmington, Del.	Seattle, Wash.	General.	1,893	6,755	4,895
San Marcos.	4	12 00	4	14 40	4	22 32	4	23 45	British	Bank Line, Ltd.	426.7	57.4	23.0	New Orleans, La.	Shanghai, China.	Cotton, oil.	5,400	7,623	5,412
Tweedbank.	4	12 10	4	15 40	4	23 28	5	10 46	British	Blue Star Line	420.0	54.0	17.6	Newcastle, Eng.	Vancouver, B. C.	General.	7,340	5,433	5,433
Saxsonar.	3	21 55	4	17 35	5	9 31	5	10 38	German	Hamburg-American Line	399.0	54.0	21.7	Hamburg, Germany	Valparaiso, Chile.	Ballast.	2,428	6,545	4,483
Kellerwald.	3	21 55	4	17 35	4	15 50	4	15 50	American	American Banana Corp.				Cristobal, C. Z.	Gatun, C. Z.	General.			
Tellie.	4	11 58	4	13 25	4	20 25	4	21 30	American	American Banana Corp.				Cristobal, C. Z.	Gatun, C. Z.	Ballast.			
No. 20, C. Z.	4	11 58	4	13 25	4	20 25	4	21 30	American	American Banana Corp.				Cristobal, C. Z.	Gatun, C. Z.	Ballast.			
No. 4120.	4	23 05	4	6 25	5	12 47	5	13 50	American	Amer-Hawain Line	404.6	53.0	18.6	Boston, Mass	Seattle, Wash.	General.	2,197	7,160	4,150
Columbian.	5	11 05	5	13 40	5	20 20	5	21 25	British	Donaldson S. A. Line	419.0	55.0	18.0	Glasgow, Scotland	Vancouver, B. C.	Ballast.			
Corrientes.	5	11 05	5	13 40	5	20 20	5	21 25	British	Donaldson S. A. Line	419.0	55.0	18.0	Glasgow, Scotland	Vancouver, B. C.	Ballast.			

¹ Tanker. ² Mine sweeper. ³ Motor ship. ⁴ Submarine. ⁵ For dry-docking. ⁶ Transport. ⁷ Launch. ⁸ Barge. ⁹ Towing barge No. 80.

Gregalia.....	4	7 15	5 14.10	5 21.10	5 22.20	British.....	425.0	56.0	18.2	Glasgow, Scotland.	Vancouver, B. C.	General, bananas	1,354	7,827	5,442
Gen. Wm. M. Graham 10.....						American.....	156.0	32.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.....			
K. R. Kingsbury 1.....	5	19 55	6 6.20	6 13.50	6 15.15	American.....	440.0	58.2	22.0	New York, N. Y.	Los Angeles, Calif.	Ballast.....	9,033	5,938	
Marore.....	5	22 10	6 6.15	6 14.52	6 16.45	American.....	550.3	72.2	22.3	New York, N. Y.	Cruz Grande, Chile	Ballast.....	15,351	4,297	
Horace.....	5	19 30	6 7.25	6 15.45	6 16.45	American.....	445.0	58.0	18.0	Boston, Mass.	Seattle, Wash.	General.....	3,159	8,699	6,363
Luckenbach.....	6	2 20	6 7.40	6 16.01	6 17.00	Swedish.....	435.0	56.0	21.0	Ornskoldsvik, Swed	Addate, Australia	General.....	4,873	7,601	5,346
Tismar 11.....	6	5 55	6 8.50	6 16.42	6 17.45	American.....	481.0	66.0	20.9	Chester, Pa.	Los Angeles, Calif.	Ballast.....	3,419	9,619	6,456
Smol 12.....	6	5 55	6 8.50	6 16.42	6 17.45	American.....	481.0	66.0	20.9	Chester, Pa.	Los Angeles, Calif.	Ballast.....	3,419	9,619	6,456
Margaret.....	6	7 20	6 10.20	6 17 37	6 22 50	Swedish.....	407.0	53.0	24.0	Göteborg, Swed.	Honolulu, T. H.	Fertilizer, gen.	6,565	7,048	5,337
Tai Shan 13.....	6	9 30	6 10.20	6 18.00	6 19 10	Panamanian.....	461.9	60.4	20.0	New York, N. Y.	Honolulu, T. H.	General.....	4,039	9,870	6,967
John.....															
Williams V 12.....	6	6 35	6 11.45	6 19.27	7 16.12	British.....	117.6	26.0	7.6	London, England.	Suva, Fiji Islands.	General.....	22	245	86
Oropesa.....	6	9 05	6 13.30	6 20.13	7 2.25	British.....	530.0	66.0	21.3	Liverpool, England	Vancouver, Chile	General.....	2,999	14,827	10,630
General Smuts.....	6	16 16	6 16.35	7 9 03	7 13 12	British.....	300.0	52.5	17.0	Cardiff, England.	Vancouver, B. C.	Ballast.....	5,406	3,841	
Durazzo.....	3	17 40	6 20.25			German.....	225.0	32.0	14.6	Cristobal, C. Z.	Gatun, C. Z.	Ballast.....	1,633	1,041	
Pacific.....															
Reliance 11.....	5	7 35	7 6.05	7 12 49	7 14 00	British.....	435.0	60.0	19.0	Glasgow, Scotland	Vancouver, B. C.	General, bananas	839	9,644	6,967
Tolten 14.....	6	8 50	7 6.00	7 13 45	7 14 40	Chilean.....	421.0	56.0	16.8	Chester, Pa.	Vancouver, Chile	General.....	1,800	7,384	5,954
Willkeno.....	6	20 10	7 7.25	7 14 50	7 16 00	American.....	415.0	55.5	15.9	Norfolk, Va.	Seattle, Wash.	General.....	2,174	7,750	5,805
Spencer.....															
Kellogg 1.....	7	00 30	7 7.35	7 15 45	7 16 48	American.....	382.0	51.3	20.0	New Orleans, La	Los Angeles, Calif	Ballast.....	5,691	3,913	
S-20 13.....	7	7 45	7 7.45	7 16 35	7 17 50	American.....	219.0	20.8		Cristobal, C. Z.	Balboa, C. Z.	Ballast.....			
S-1.....	7	8 10	7 8.10	7 16 44	7 17 50	American.....	219.0	20.8		Cristobal, C. Z.	Balboa, C. Z.	Ballast.....			
S-18 13.....	7	8 10	7 8.10	7 16 44	7 17 50	American.....	219.0	20.8		Cristobal, C. Z.	Balboa, C. Z.	Ballast.....			
S-19 13.....	7	8 10	7 8.10	7 17 28	7 18 35	American.....	219.0	20.8		Cristobal, C. Z.	Balboa, C. Z.	Ballast.....			
S-21 13.....	7	8 10	7 8.10	7 17 28	7 18 35	American.....	219.0	20.8		Cristobal, C. Z.	Balboa, C. Z.	Ballast.....			
Iukisan Maru.....	7	00 35	7 9 05	7 17 50	7 18 50	Japanese.....	385.0	51.0	25.8	Houston, Tex.	Yokohama, Japan.	Cotton, phoepto.	7,060	6,242	4,449
West Malwah.....	7	3 40	7 9 40	7 18 37	7 20 00	American.....	410.5	54.0	22.0	Santos, Brazil	Vancouver, B. C.	General.....	5,640	6,588	5,049
Nordpol 11.....	7	10 30	7 10 40	7 19 10	7 22 59	Danish.....	389.0	53.2	17.0	New York, N. Y.	Talcahuano, Chile	General.....	3,000	6,252	4,558
Lebore.....	7	4 40	7 12 25	7 21 05	7 23 20	American.....	549.6	72.2	24.0	Baltimore, Md.	Cruz Grande, Chile	Ballast.....	14,325	4,635	
Camden 14.....	31	18 10	7 13 30	7 22 30	7 23 10	American.....	403.0	43.0	25.2	Hampton Rds., Va.	Los Angeles, Calif.	Ballast.....			
Koranton 14.....	7	13 20	7 14 35	7 22 30	7 23 44	British.....	430.0	55.0	17.0	Liverpool, England	Vancouver, B. C.	Ballast.....	6,811	4,810	
Chevink 15.....	7	7 50	7 7.50	7 15 05	7 16 30	American.....	180.0	33.5		Cristobal, C. Z.	Balboa, C. Z.	Ballast.....			
Santa.....															
Veronica.....	8	21 45	8 6 20	8 13 15	8 14 15	American.....	251.0	43.5	20.6	Baltimore, Md.	Kahului, T. H.	General.....	1,857	2,823	1,740
Remora.....	8	6 20	8 7 20	8 14 10	8 23 45	British.....	435.0	62.3	27.0	London, England	Wellington, N. Z.	General.....	4,256	11,911	8,945
Portland 11.....	7	1 20	8 8 10	8 15 17	8 16 30	German.....	462.2	61.2	19.1	Hamburg, Germany	Vancouver, B. C.	General.....	2,810	9,139	6,666
Fairfield City.....	8	4 10	8 8 35	8 16 23	8 17 40	American.....	424.0	50.0	25.6	Philadelphia, Pa.	Singapore.	Steel, general.....	7,741	7,611	5,450
Jane.....	8	11 40	8 12 00	9 23 20	10 00 08	American.....	409.5	54.2	21.4	Baltimore, Md.	Seattle, Wash.	General.....	5,248	6,615	4,966
Christenson.....	28	15 45	8 13 10	8 20 50	8 22 25	British.....	215.7	33.5	16.0	Cristobal, C. Z.	Champerico, Guat.	General.....	407	1,273	705
Acajula.....															
Point.....															
San Pablo.....	6	11 50	8 13 20	8 21 28	8 23 00	American.....	324.0	46.0	21.5	New Orleans, La.	Vancouver, B. C.	General, lumber	3,550	3,994	2,591
La Perla.....	8	14 45	8 14 45	8 22 58	8 23 58	American.....	325.2	48.1	18.10	Cristobal, C. Z.	San Francisco, Cal.	General, mules	186	4,033	2,261
Nosa Queen.....	7	16 45	8 14 45	8 23 03	8 23 03	American.....	324.0	46.2	21.3	New Orleans, La.	Corral, Chile	General.....	3,623	3,981	2,600
Eendijk.....	7	10 25	8 15 00	8 21 55	8 23 00	Dutch.....	469.7	58.3	20.5	Antwerp, Belgium.	Vancouver, B. C.	General, bananas	1,206	8,514	6,066
Atlas 1.....	8	19 30	8 19 45	9 11 29	9 12 40	American.....	439.0	58.2	20.0	New York, N. Y.	Los Angeles, Calif.	Ballast.....	7,348	5,164	

1 Tanker. 2 Mine planter. 3 Motor ship. 4 Motor schooner. 5 Submarine. 6 Submarine tender. 7 Mine sweeper. 8 Tiplate and sulphate.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Ranapu	2	2.45	2	6.29	2	13.05	3	1.30	British.	N. Z. Shipping Co.	457.3	58.4	21.4	Auckland, N. Z.	London, England	C. S. & general	2,850 ¹	9,079	6,798
Dochet	2	5.30	2	6.51	2	14.15	2	14.15	American.	Reshow Line.	386.8	52.2	20.4	Seattle, Wash.	New Orleans, La.	Lumber, general	5,882	5,705	4,167
Ghoef	2	9.40	2	10.31	2	18.30	2	19.05	British.	Watts, Watts & Co.	355.3	48.5	24.0	Balboa, C. Z.	Cristobal, C. Z.	Ballast	5,975	4,387	3,151
Woburn	2	10.15	2	11.06	2	19.05	3	2.10	American.	U. S. Tankship Corp.	370.0	51.1	26.0	Port Allen, T. H.	Acres ²¹	Molasses	8,626	6,170	4,253
Kieschomillas	2	11.30	2	12.59	2	20.05	2	23.40	Dutch.	Holland-American Line.	422.9	64.2	24.0	Vancouver, B. C.	Antwerp, Belgium	General	8,410	9,165	7,056
Meerdijk	2	10.15	2	13.54	2	20.40	2	23.40	German.	Hamburg-American Line.	438.2	55.3	25.4	Antofagasta, Chile	Hamburg, Germany	General	8,350	7,286	5,174
Amstis	2	13.45	2	17.30	2	11.05	3	11.05	German.	Hamburg-American Line.	434.0	55.3	25.0	Corral, Chile	Hamburg, Germany	(²²)	8,305		
Ruhr ²³	2	13.45	2	17.30	2	11.05	3	11.05	American.	Petroleum Nav. Co.	340.1	49.0	25.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline	5,200	4,613	2,996
King Bleddyn.	2	23.30	3	6.12	3	14.15	3	16.55	British.	King Line, Ltd.	412.4	55.8	28.3	Portland, Ore.	Dublin, Ireland	Wheat	9,650	6,596	4,634
Eate	3	13.30	3	6.35	3	14.45	3	19.35	British.	North German Lloyd	405.5	63.8	29.0	Los Angeles, Calif.	Bremen, Germany	General	9,891	9,965	6,656
Brenaventura.	3	1.00	3	7.23	3	15.50	3	15.00	American.	Panama R. S. S. Line	281.0	43.0	16.2	Guaymas, Mex.	New York, N. Y.	General	1,377	7,100	5,065
Glenbank	3	6.55	3	8.09	3	17.15	3	23.30	British.	Bank Line, Ltd.	420.4	53.9	24.0	Guaymas, Mex.	Liverpool, England	Sugar	7,477	1,632	1,041
Durazo	3	8.00	3	8.33	3	17.40	3	21.20	German.	Hamburg-American Line	227.5	34.4	13.3	Guaymas, Mex.	Cristobal, C. Z.	Nitrates	4,649	3,983	2,570
Nesa Ponce	3	8.15	3	9.06	3	17.40	3	21.20	American.	N. O. & A. S. S. Co.	324.0	46.2	24.2	Talcahuano, Chile	New Orleans, La.	Light dist. fuel	12,198	10,084	7,388
India Arrow	3	12.15	3	12.56	3	20.50	3	20.50	American.	Standard Transp. Co.	468.3	62.7	30.0	Los Angeles, Calif.	Boston, Mass.	General	36		
Chateau Thierry	4	6.21	4	6.21	4	13.40	5	11.00	American.	U. S. Army	448.0	58.0	26.0	Balboa, C. Z.	New York, N. Y.	Ballast	11,298	10,084	7,388
Svan	4	6.30	4	6.30	4	13.30	5	11.00	American.	U. S. Navy	187.0			Balboa, C. Z.	New York, N. Y.	Gasoline	6,630	6,600	4,973
China Arrow	4	15.20	4	6.37	4	14.45	4	14.45	American.	Standard Transp. Co.	468.3	62.7	27.2	Los Angeles, Calif.	New York, N. Y.	Copper, ore	7,180	5,534	3,962
Chilcop	4	19.15	4	7.10	4	16.05	4	16.05	American.	Zhal S. S. Co.	411.5	54.1	22.0	Antofagasta, Chile	Acres ²¹	Nitrate of soda	7,500	6,447	4,757
Zonave	4	6.30	4	9.15	4	18.50	4	18.50	British.	Chal S. S. Co.	370.9	51.0	24.0	Torconilla, Chile	Acres ²¹	Nitrate of soda	7,500	6,447	4,757
S-16 ²⁰	4	6.30	4	10.40	4	15.55	4	15.55	American.	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.	Lumber, general	8,132	10,086	7,226
Bronnoy	4	18.15	4	11.00	4	19.30	4	19.30	Norway	Canadian Transp. Co.	380.5	54.7	24.0	Vancouver, B. C.	Hull, England	Lumber, general	8,132	10,086	7,226
Pacific	4	15.55	4	16.50	5	10.40	5	10.40	British.	Furness, Withy & Co.	450.4	60.8	27.0	Vancouver, B. C.	Glasgow, Scotland	General	6,850	9,032	6,038
President ²⁴	4	17.30	4	18.11	5	11.10	5	11.10	American.	Amor-Hawaiian Line.	471.1	60.0	24.0	Portland, Ore.	Boston, Mass.	General	3,722	5,926	4,178
Nehaskan	4	17.30	4	18.11	5	11.10	5	11.10	American.	Panama Mail S. S. Co.	380.6	48.7	23.0	San Francisco, Cal.	New York, N. Y.	General	8,500	7,963	5,837
Enador	4	14.35	5	6.33	5	13.45	5	13.45	American.	Hamburg-American Line	394.4	54.2	26.3	Valparaiso, Chile	Hamburg, Germany	General	8,114	6,571	4,907
Laurits	4	20.30	5	6.33	5	15.20	5	17.20	Norwegian.	Fred Olsen & Co.	435.9	56.2	25.0	Vancouver, B. C.	Oslo, Norway	General	8,500	7,963	5,837
Schwartzwald	4	15.15	5	7.12	5	15.10	5	15.10	German.	Hamburg-American Line	297.5	42.1	15.0	San Francisco, Cal.	Kingston, Jamaica	General	8,114	6,571	4,907
Selago	5	8.30	5	8.30	5	15.10	5	15.10	American.	U. S. Government	297.5	42.1	15.0	San Francisco, Cal.	Kingston, Jamaica	General	8,500	7,963	5,837
Edward	5	6.20	5	8.39	5	17.30	5	17.30	American.	Luckenbach Line.	436.6	57.2	31.0	Seattle, Wash.	Boston, Mass.	General, lumber	9,344	8,543	6,427
Scottsburg	4	20.00	5	12.47	5	19.50	5	19.50	American.	Tampa Intercoastal Co.	419.5	56.5	27.0	Manila, P. I.	New Orleans, La.	General	5,321	8,696	6,316
Frumenton	5	14.45	5	15.23	5	22.30	5	22.30	British.	R. Chapman & Son	436.0	60.0	27.0	Vancouver, B. C.	London, England	Whet	10,220	8,144	6,028
Livenza	5	17.15	5	18.00	6	11.20	6	11.55	Italian.	Naples, Libera-Tristina	404.6	54.5	26.0	Vancouver, B. C.	London, England	General	6,900	6,129	4,507
Agaworld	5	17.30	6	6.06	6	13.50	6	13.50	American.	Richfield Oil Co.	429.0	59.2	26.0	Los Angeles, Calif.	Norfolk, Va.	Gasoline	10,000	7,230	5,615

¹ Tanker. ²¹ Launch. ²² Motor ship. ²³ Tug. ²⁴ Submarine. ²⁵ For orders. ²⁶ General, saline, copper, and metal. ²⁷ Salitre, sugar, cotton, and general. ²⁸ Coffee, cocon, and ivory nuts. ²⁹ U. S. Coast Guard cutter.

Ship	Class	From	Date	Agency	Destination	Remarks
Clio	23 30	6 15 00	6 16 05	Danzig	Talara, Peru	Gasoline
Paul Shoup	3 40	6 15 40	6 15 40	American	Los Angeles, Calif.	New York, N. Y.
Gracia	20 40	6 16 55	6 16 55	British	Vancouver, B. C.	General
Justin	1 35	6 8 04	7 00 05	German	North German Lloyd	General
Mantales	7 45	6 10 10	6 17 55	6 00	Roiland Line	General
Keats	11 15	6 11 52	6 19 00	6 00	Shakspere Shipping Co	Nitrates
Elstree Grange	6 30	6 12 26	6 20 30	6 00	Furuss-Pacific Line	Fresh fruit
Lake Gorin	7 25	6 13 20	6 20 30	American	Marchfield, Ore.	General
La Perla	6 40	6 15 33	6 21 30	8 14 45	Ford Motor Co.	General
San Julian	7 14	6 16 00	7 18 45	American	United States S. Co.	Lumber, general
Flomar	7 14	7 7 49	7 16 00	American	Portland, Ore.	Lumber
Somerset	7 10 00	7 10 45	7 22 05	British	Lyttelton, N. Z.	Frozen, general
Kwantok	7 10 55	7 11 42	7 18 35	Japanese	Oturu, Japan	General
Castana 2	7 11 30	7 12 20	7 20 45	American	Honouapo, Hawaii	Molasses
Castana 1	7 12 58	7 12 58	7 22 55	American	Balboa, C. Z.	Ballast
California	7 11 55	7 13 05	7 22 20	American	Standard Oil Co. of Cal.	Gasoline
Willpelo	7 12 10	7 13 24	7 22 55	American	Amer-Hawaiian Line	General, lumber
New Jersey	7 18 00	6 10 10	8 14 00	8 14 00	The Texas Co.	Gasoline
Pennac	7 20 20	6 9 27	8 15 20	American	Amer-Hawaiian Line	General
Point Sur	8 5 30	7 10 10	8 18 55	8 18 55	Gulf-Pacific Line	General
Berlele	7 22 30	8 7 28	8 20 10	9 1 40	Royal Neth. S. S. Co.	General
Panaghis	7 22 30	8 8 48	8 20 10	8 20 10	N. D. Lykiardopulo	Nitrates, general
Santa Ofra	8 12 20	8 9 14	8 17 00	9 2 00	Grace Line	Nitrate of soda
Caldas	8 12 20	8 12 53	8 19 55	8 19 55	National Navigation Co.	General, copper

26 Motor ship.

27 Tug.

28 For orders.

29 Lumber, pulp, and auto parts.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Date	Vessel	Line	From	Date	Vessel	Line	For
November 2	Calamares	United Fruit Co.	Port Limon, Costa Rica.	November 2	No. 9685 ³¹	Pan American Airways	San Salvador and waypts.
November 2	Permina Carvallo ³⁰	Ramon Carvallo	Colon, Rep. of Panama.	November 2	No. 142-M ³¹	Pan American Airways	Miami via waypts.
November 3	Tolon	United Fruit Co.	New York via Habana.	November 2	Orinoco	Hamburg-American Line	Hamburg via waypts.
November 3	Darien C-35 ³¹	Pan American Airways	San Salvador and waypts.	November 2	Calamares	United Fruit Co.	New York via Habana.
November 4	Acacia ³²	Seacla Airplane Co.	Barranquilla, Colombia.	November 2	Dungannon	The Texas Co.	Tampico, Mexico.
November 4	No. 300-N ³⁴	U. S. Government	Talara, Peru.	November 2	Permina Carvallo ³⁰	Ramon Carvallo	San Andres, Colombia.
November 4	Santa Marta	Pan American-Grace Airways	Avonmouth via waypts.	November 3	Amnetta I. ³³	Edlers & Fyffes Line	Colon, Rep. of Panama.
November 5	Ancun	Panama R. R. S. S. Line	New York via Haiti.	November 5	Tolosa	United Fruit Co.	Avonmouth via waypts.
November 5	No. 8817 ³¹	United Fruit Co.	New Orleans, La.	November 5	No. 9670 ³¹	Pan American Airways	Port Limon, Costa Rica.
November 5	No. 9776 ³¹	Pan American Airways	Miami via waypts.	November 5	No. 9137 ³¹	United Fruit Co.	San Salvador and waypts.
November 5	No. 9685 ³¹	Pan American Airways	San Salvador and waypts.	November 5	Tela	United Fruit Co.	Miami via waypts.
November 6	Amnetta I. ³³	A. Tagaropolos	Colon, Rep. of Panama.	November 6	Inapauqua ³³	A. Tagaropolos	Bocas, Rep. of Panama.
November 6	Motor schooner.	32 Air mail carrier.	33 Motor boat.	November 6	Anachneuca ³¹	United Fruit Co.	Colon, Rep. of Panama.
		34 Lighthouse tender.					Colon, Rep. of Panama.

* Other than ships passing through the Canal.

* DEPARTURES.

Tanker Traffic Through the Panama Canal in October, 1930.

During the month of October, 1930, 93 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 531,036 on which tolls of \$466,530.01 were paid. Cargo amounted to 493,146 tons, which included 482,246 tons of mineral oils, 4,500 tons of creosote, and 6,400 tons of coconut oil. In point of net tonnage, tanker traffic decreased 18.3 per cent as compared with the tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 22.4 per cent.

Tank vessels comprised 18.0 per cent of the total commercial transits through the Canal during the month; made up 20.5 per cent of the total Panama Canal net tonnage; were the source of 20.4 per cent of the tolls collected; and carried 20.6 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of October, 1930, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for October, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	9	47,501	\$35,602.23	7,603
Danzig.....	1	6,310	4,543.20	.....
French.....	1	5,072	3,651.84	.....
Norwegian.....	5	27,267	19,632.24	.....
United States.....	23	165,943	123,833.62	17,892
Total, October, 1930.....	44	252,093	187,263.13	25,495
Total, September, 1930.....	50	283,237	209,912.77	16,241
Total, August, 1930.....	49	273,990	205,959.11	41,415
Total, October, 1929.....	57	317,788	234,524.45	25,093
<i>Pacific to Atlantic.</i>				
British.....	13	68,898	70,358.05	112,937
Danzig.....	2	12,465	13,130.00	22,237
French.....	2	10,140	10,961.25	17,672
German.....	1	4,435	4,773.75	8,414
Norwegian.....	4	22,098	21,761.93	30,914
United States.....	27	160,907	158,281.90	275,477
Total, October, 1930.....	49	278,943	279,266.88	467,651
Total, September, 1930.....	44	249,972	257,429.74	450,023
Total, August, 1930.....	46	252,114	255,990.30	449,022
Total, October, 1929.....	60	332,356	338,648.49	610,165

* Includes 4,500 tons creosote.

† Includes 6,400 tons coconut oil.

The following tabulation shows the tanker traffic through the Canal during October, 1930, classified according to trade routes:

ATLANTIC TO PACIFIC.

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	26	149,912	\$108,002.79	.....
United States to South America.....	3	14,424	10,385.28	.....
Canadian intercoastal.....	1	4,284	3,838.75	4,500
Canada to South America.....	1	7,648	5,506.56	.....
Central America to South America.....	1	3,892	4,203.75	7,603
West Indies to United States.....	1	5,132	3,695.04	.....
West Indies to South America.....	1	7,363	8,835.60	13,392
Europe to United States.....	9	53,128	38,252.16	.....
Europe to South America.....	1	6,310	4,543.20	.....

* Creosote.

PACIFIC TO ATLANTIC.

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	24	146,850	\$144,825.30	261,454
United States to Central America.....	1	5,423	3,904.56	.....
United States to West Indies.....	2	10,544	7,591.68	.....
United States to Europe.....	12	60,422	63,843.75	107,103
South American to United States.....	4	20,863	22,722.50	39,949
South America to Canada.....	2	14,420	15,457.50	31,293
South America to West Indies.....	1	3,892	2,802.24	.....
South America to Europe.....	2	12,616	13,423.75	21,452
Philippine Islands to United States.....	1	3,913	4,695.60	* 6,400

* Coconut oil.

Of the tanker traffic passing through the Canal in October, 1930, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for October, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
October, 1930.....	33	192,300	\$138,456.00	.....
September, 1930.....	36	210,397	152,995.07	7,909
August, 1930.....	33	193,904	159,567.59	.....
October, 1929.....	40	227,317	165,551.16	1,040
<i>From Los Angeles.</i>				
October, 1930.....	34	198,336	193,930.29	328,365
September, 1930.....	29	166,508	169,483.10	300,859
August, 1930.....	33	183,370	185,721.60	325,811
October, 1929.....	41	226,240	227,992.50	409,611

Traffic by Nationality for October, 1930.

The following tabulation shows the commercial traffic through the Canal during the month of October, 1930, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for October, 1929 and 1928:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	81	423,760	306,935	506,775	306,236	\$336,512.32	166,811
Chilean.....	2	8,200	5,586	11,480	6,417	6,982.50	2,068
Colombian.....	5	881	856	1,285	858	1,042.10	1,215
Danish.....	6	27,235	20,213	31,294	20,393	21,558.32	8,549
Danzig.....	1	6,310	5,346	8,940	5,050	4,543.20	.....
Dutch.....	6	28,598	17,340	29,746	17,884	21,675.00	11,010
French.....	6	34,653	24,659	40,305	24,002	28,985.59	14,400
German.....	13	53,670	38,298	63,215	38,258	47,298.60	27,800
Greek.....	1	3,429	2,231	3,536	2,223	2,468.88	.....
Italian.....	4	24,044	19,729	31,713	18,601	20,080.87	3,542
Japanese.....	8	42,546	35,197	53,778	35,072	43,840.15	45,880
Norwegian.....	19	91,882	65,088	106,205	63,982	70,661.30	55,837
Panamanian.....	1	20	15	20	16	14.40	.....
Spanish.....	3	8,272	6,993	10,739	6,671	6,880.36	4,900
Swedish.....	2	9,415	6,633	20,297	8,050	6,849.62	4,120
United States.....	107	591,778	443,387	720,823	441,442	504,494.95	308,721
Total, October, 1930.....	265	1,354,693	998,506	1,640,251	995,155	1,123,888.16	649,853
Total, October, 1929.....	277	1,394,206	1,049,506	1,728,277	1,050,939	1,195,727.56	848,347
Total, October, 1928.....	306	1,381,688	1,050,917	1,718,872	1,048,282	1,190,585.26	875,641

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	3	17,243	12,244	19,519	11,489	\$15,305.00	26,850
British	* 63	291,502	224,568	373,027	228,176	285,311.80	379,263
Chilean	2	9,377	6,899	14,630	7,952	8,623.75	6,760
Colombian	4	574	554	4,880	550	682.10	750
Danish	4	23,451	15,723	26,346	16,354	19,653.75	31,733
Danzig	2	12,465	10,504	17,895	10,048	13,130.00	22,237
Dutch	6	24,735	16,055	27,853	16,906	20,818.75	31,487
French	6	32,809	23,703	39,697	23,412	29,628.75	48,524
German	15	60,735	43,808	72,570	43,761	54,760.00	84,636
Italian	3	24,683	14,764	30,485	18,027	18,455.00	14,778
Japanese	14	66,140	60,323	83,605	57,512	74,653.55	92,204
Norwegian	15	77,511	53,428	88,678	53,525	63,903.97	96,851
Peruvian	1	3,544	3,510	4,763	3,089	4,252.80	4,057
Swedish	4	18,245	12,945	40,221	15,634	16,181.25	56,631
United States	108	556,243	426,624	695,052	426,316	530,475.95	829,326
Yugoslav	2	10,210	7,406	12,038	7,390	9,257.50	18,470
Total, October, 1930.	252	1,229,467	933,658	1,547,249	940,141	1,165,093.92	1,744,557
Total, October, 1929.	287	1,353,743	1,029,194	1,690,057	1,032,129	1,290,170.15	1,997,296
Total, October, 1928.	251	1,133,692	867,994	1,436,367	874,503	1,084,360.04	1,706,836

* Includes 3 naval vessels having a total of 16,030 displacement tons.

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	3	17,243	12,244	19,519	11,489	\$15,305.00	26,850
British	* 144	715,262	531,503	879,802	534,412	621,824.12	546,074
Chilean	4	17,577	12,485	26,100	14,369	15,606.25	8,828
Colombian	9	1,455	1,410	2,165	1,408	1,724.20	1,965
Danish	10	50,686	35,936	57,740	36,747	41,212.07	40,282
Danzig	3	18,775	15,850	26,835	15,098	17,673.20	22,237
Dutch	12	53,333	33,905	57,599	34,790	42,493.75	42,497
French	12	67,462	48,362	80,002	47,414	58,614.34	62,924
German	28	114,405	82,106	135,785	82,019	102,058.60	112,436
Greek	1	3,429	2,231	3,536	2,223	2,468.88	
Italian	7	48,727	34,493	62,198	36,628	38,535.87	18,320
Japanese	22	108,686	95,520	137,383	92,584	118,493.70	138,084
Norwegian	34	169,393	118,516	194,883	117,507	134,565.27	152,688
Panamanian	1	20	15	20	16	14.40	
Peruvian	1	3,544	3,510	4,763	3,089	4,252.80	4,057
Spanish	3	8,272	6,993	10,739	6,671	6,880.36	4,900
Swedish	6	27,660	19,578	60,518	23,684	23,030.87	60,751
United States	215	1,148,021	870,011	1,415,875	867,758	1,034,970.90	1,133,047
Yugoslav	2	10,210	7,406	12,038	7,390	9,257.50	18,470
Total, October, 1930.	517	2,584,160	1,932,164	3,187,500	1,935,296	2,288,982.08	2,394,410
Total, October, 1929.	564	2,747,949	2,078,700	3,418,334	2,083,068	2,485,897.71	2,845,643
Total, October, 1928.	557	2,515,380	1,918,911	3,155,239	1,922,785	2,274,945.30	2,582,477

* Includes 3 naval vessels having a total of 16,030 displacement tons.

Coal.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$8 per ton of 2,240 pounds at Cristobal, and \$11 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Water Supply During First Ten Months of 1930.

The Section of Surveys reports that during the 10-month period, January to October, inclusive, in 1930, the rainfall over the Atlantic and Pacific entrances to the Canal has been about 81 per cent of the average. The net yield of the Gatun Lake watershed has been only 66 per cent of the average, or 84 billion cubic feet as compared with a 17-year average of 127 billion cubic feet. This is a low record for net yield from January to October, inclusive, since the formation of Gatun Lake, which is considered to date from January, 1914, when the lake surface was raised to approximately 85 feet above sea level.

In 1905 the discharge of the Chagres River at Alhajuella from January to October, inclusive, amounted to 40 billion cubic feet compared with 46 billion cubic feet so far this year, but any attempt to convert this 40 billion of Chagres yield into a probable net yield over the lake watershed is liable to be very misleading. The Gatun Lake watershed net yield from January to October, inclusive, since the formation of Gatun Lake is shown below in billion cubic feet:

Year.	Net yield.	Year.	Net yield.
	<i>Billions of cu. ft.</i>		<i>Billions of cu. ft.</i>
1914.....	115	1922.....	128
1915.....	167	1923.....	146
1916.....	143	1924.....	136
1917.....	142	1925.....	101
1918.....	149	1926.....	105
1919.....	109	1927.....	180
1920.....	112	1928.....	125
1921.....	119	1929.....	104
		1930.....	84

Prophecy of weather on the Isthmus is extremely conjectural but the indications from past experience are that the coming dry season will begin early and be unusually dry. Unless conditions change materially this month, the raising of the surface elevation of Gatun Lake to 87 feet above sea level for the beginning of the dry season will probably take place earlier this year than usual.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending November 8, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Arwyco.....	General Navigation Co.....	October 23...	November 7...	21	981
Heron.....	H. H. Smith Sorensen.....	October 25...	October 30...	7,406	1
Geisha.....	Knut Knudsen.....	October 26...	October 26...	4	
Acajutla.....	Pacific Steam Navigation Co.....	October 27...	October 28...	1	
Chaumont.....	U. S. Government.....	October 27...	October 29...	17	
Bodegraven.....	Royal Netherlands S. S. Co.....	October 28...	October 28...	158	
Santa Maria.....	Grace Line.....	October 29...	October 29...	12	6
Wichita.....	Roosevelt S. S. Co.....	October 31...	October 31...	424	
Virginia.....	Panama-Pacific Line.....	October 31...	October 31...		210
San Rafael.....	Quaker Line.....	October 31...	November 1...	47	
Chateau Thierry.....	U. S. Government.....	October 31...	November 4...	269	36
Bronnoy.....	Canadian Transport Co.....	November 3...	November 4...	372	
Santa Rita.....	Grace Line.....	November 4...	November 4...	20	14
Siam.....	East Asiatic Co.....	November 4...	November 4...	65	
El Salvador.....	Panama Mail S. S. Co.....	November 4...	November 5...	10	16
Scottsburg.....	Tampa Intercean S. S. Co.....	November 4...	November 5...	166	
Enador.....	Panama Mail S. S. Co.....	November 4...	November 5...	103	
Mainzales.....	North German Lloyd.....	November 6...	November 6...	2	
Santa Clara.....	Grace Line.....	November 8...	November 8...	1	

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending November 8, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Rialto	Italian Line		October 26.		151
Daytonian	Leyland Line		October 27.		39
Cristobal	Panama R. R. S. S. Line		October 28.		359
Salvador	Pacific Steam Navigation Co.		November 1		610
Ulua	United Fruit Co.	October 26.	October 26.	34	534
Sacramento	Nelson Line	October 26.	October 27.	453	(²)
Cauca	National Navigation Co.	October 26.	November 1	175	211
Ammon	Hamburg-American Line	October 27.	October 27.	23	26
Santa Elisa	Grace Line	October 27.	October 27.	188	(²)
Almagro	Pacific Steam Navigation Co.	October 10.	October 28.	99	63
Van Rensselaer	Royal Netherlands S. S. Co.	October 27.	October 28.	132	(²)
Bodegraven	Royal Netherlands S. S. Co.	October 27.	October 28.	135	22
Schwaben	North German Lloyd	October 27.	October 28.	76	23
Ester Thorden	Aluminium Line	October 27.	October 28.	238	353
Calamares	United Fruit Co.	October 27.	October 29.	495	14
Acajutla	Pacific Steam Navigation Co.	October 28.	October 28.	119	
Orinoco	Hamburg-American Line	October 28.	October 28.	99	(²)
Carl Legien	Hamburg-American Line	October 28.	October 29.	(¹)	82
Orazio	Italian Line	October 28.	October 30.	93	274
Canadian Transporter	Canadian National Steamships	October 29.	October 29.	30	(²)
Aconcagua	Chilean Line	October 29.	October 29.	28	5
San Felipe	Quaker Line	October 29.	October 29.	148	47
Santa Maria	Grace Line	October 29.	October 29.	113	24
Iriona	United Fruit Co.	October 29.	October 30.	1,587	42
Buenos Aires	Spanish Line	October 29.	October 30.	200	494
Zacapa	United Fruit Co.	October 29.	October 30.	617	722
Cali	North German Lloyd	October 29.	November 1	508	259
Swiftsure	C. D. Mallory & Co.	October 29.	October 30.	11,716	(²)
Dinteldijk	Pacific Steam Navigation Co.	October 30.	October 30.	(¹)	33
Flandre	French Line	October 30.	October 30.	226	120
Colombo	Italian Line	October 30.	October 31.	385	390
Alaska	French Line	October 30.	October 31.	212	(²)
Guayaquil	Panama R. R. S. S. Line	October 30.	November 1.	852	(²)
Suriname	United Fruit Co.	October 31.	November 1	1,189	(²)
Wichita	Roosevelt Line	October 31.	November 1	368	(²)
Dugannon	The Texas Oil Co.	October 31.	November 1	10,500	(²)
Illinois	The Texas Oil Co.	October 31.	November 1	650	(²)
Delftdijk	Pacific Steam Navigation Co.	October 31.	November 1	40	439
Camden	United Fruit Co.	October 30.	November 1	9,295	(²)
Amapala	Standard Fruit & S. S. Co.	October 31.	November 1	189	472
Creole Lindo	Creole Petroleum Co.	November 1	November 1	3,149	
Boskoop	Royal Netherlands S. S. Co.	November 1	November 1	257	31
Iriona	United Fruit Co.	November 1	November 1	(¹)	82
Cid	Pacific Steam Navigation Co.	November 1	November 1	111	2
Guayaquil	Panama R. R. S. S. Line		November 1		179
Daytonian	Leyland S. S. Line		November 1		83
Van Rensselaer	Royal Netherlands S. S. Co.		November 1		299
Bitterfeld	Hamburg-American Line		November 1		266
Acajutla	Pacific Steam Navigation Co.		November 8		889
Orinoco	Hamburg-American Line	November 1.	November 2	(²)	183
Moerdyk	Pacific Steam Navigation Co.	November 2	November 2	(²)	112
Winnepeg	French Line	November 2	November 2	(¹)	97
Balboa	Johnson Line	November 2	November 2	(¹)	67
Calamares	United Fruit Co.	November 2	November 2	14	982
Durazzo	Hamburg-American Line	November 3	November 3	527	
Este	North German Lloyd	November 3	November 3	14	63
Kellerwald	Hamburg-American Line	November 3	November 3	307	96
El Salvador	Panama Mail S. S. Co.	November 3	November 3	383	524
Santa Rita	Grace Line	November 3	November 4	87	164
Buenaventura	Panama R. R. S. S. Co.	November 3	November 4	230	
Tolosa	United Fruit Co.	November 3	November 5	333	23
San Marcos	Quaker Line	November 4	November 4	246	(²)
Stam	United Fruit Co.	November 4	November 4	59	(²)
Gregalia	Donaldson Brothers	November 4	November 5		332
Ancon	Panama R. R. S. S. Co.	November 5	November 5	3,567	
Tela	United Fruit Co.	November 5	November 5	662	44
Santa Marta	United Fruit Co.	November 5	November 6	359	464
Ecuador	Panama Mail S. S. Co.	November 5	November 6	580	2
Pacific Reliance	Furness, Withy & Co.	November 5	November 7	(²)	331
Lauritz Swenson	Fred Olsen & Co.	November 5	November 8	(²)	126
Manizales	North German Lloyd	November 6	November 6	1,655	
Tolten	Chilean S. S. Line	November 6	November 6	(²)	28
Henry Horn	Aluminium Line	November 6	November 6	1,175	110
Justin	North German Lloyd	November 6	November 6	(²)	243
Oropesa	Pacific Steam Navigation Co.	November 6	November 6	47	23
Dorelian	Leyland S. S. Line	November 6	November 7	370	(²)
Bogota	United Fruit Co.	November 7	November 7	97	59
Kwanto Maru	Osaka Shosen Kaisha	November 7	November 7	229	60
Coppename	United Fruit Co.	November 7	November 8	60	47

* No cargo discharged.

* No cargo laded.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Loaded.
				Tons.	Tons.
La Perla	United Fruit Co.	November 7 ..	November 8 ..	784	260
Nosa Queen	N. O. & S. A. S. S. Co.	November 7 ..	November 8 ..	98	1,246
Eemdyk	Pacific Steam Navigation Co.	November 7 ..	November 8 ..	286	171
Portland	Hamburg-American Line	November 7 ..	November 8 ..	56	244
Atlantida	Standard Fruit & S. S. Co.	November 7 ..	November 8 ..	68	322
Caldas	United Fruit Co.	November 8 ..	.....	217	.....
Camden	United Fruit Co.	November 8 ..	.....	4,428	.....
Tela	United Fruit Co.	November 8 ..	November 8 ..	199	487

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Location of Patients and Visiting Hours, at Gorgas Hospital.

The following table shows the distribution of patients in the Gorgas hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Visiting Hours.
Section "A:"	
Ward 2, Semi-private, white male	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 3, American male, eye, ear, nose and throat patients	Tuesdays, Thursdays and Saturdays, 2.30 to 4.30 p. m., 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 4, Private rooms	Daily, same as Ward 2 (above).
Section "B:"	
Ward 5, Male, private rooms, American boys	} Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 6, Foreign, male and female, private rooms, American girls	
Ward 7, White females, private rooms	
Ward 8, Obstetrical department, white females	
Nursery	No visitors permitted in nursery.
Section "C:"	
Ward 9, Colored, male	} Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 10, White foreign, male	
Ward 11, Colored, male (surgical)	
Ward 12, Colored, male (medical)	
Ward 13, Colored, male, G. U.	
Ward 14, White, male, G. U.	Tuesdays, Thursdays, Saturdays, Sundays, and holidays, 2.30 to 4.30 p. m.
Section "D:"	
Ward 15, American, male (surgical)	} Tuesdays, Thursdays, Saturdays, Sundays and holidays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.
Ward 16, American, male (medical)	
Ward 17, Colored children	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3.00 p. m.
Ward 18, White children	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 19, Colored, female (medical)	} Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 20, Colored, female, surgical, obstetrical	
Isolation section	No visitors permitted except to visit tuberculosis patients Thursdays, Sundays and holidays, 1.30 to 3.00 p. m.

Permission to visit outside of visiting hours may be granted upon application to the Superintendent's Office. Immediate relatives of seriously ill patients will be admitted at any time by and in the discretion of the attending physician, section nurse, and in her absence, the nurse in charge.

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Volume XXIV. Balboa Heights, C. Z., November 19, 1930. No. 16.

Cargo Through the Canal During October, 1930.

On pages 220 and 221 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in October, 1930. This cargo, segregated according to direction, as compared with October, 1929, and the differences, are shown in the following tabulation:

	October, 1929.	October, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	848,347	649,853	-198,494
Pacific to Atlantic.....	1,997,296	1,744,557	-252,739
Total.....	2,845,643	2,394,410	-451,233

It will be noted from the above that the Atlantic to Pacific tonnage decreased 198,494 tons, or 23.4 per cent, as compared with October, 1929, and that from the Pacific to the Atlantic decreased 252,739 tons, or 12.7 per cent, making a total decrease of cargo tonnage in both directions of 451,233 tons, or 15.9 per cent. As in the past several months, the heavy decline in Pacific-bound tonnage has been due to a general curtailment in shipments and to decreases in cargo tonnage of several important commodities as indicated under "Principal commodities." The Atlantic-bound tonnage, while showing increases in many of the ordinarily important commodities, particularly food products, was depressed by heavy decreases in the shipments of mineral oils and nitrates.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-three and eight-tenths per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 22.3 per cent in Europe. Tonnage from the United States decreased 135,531 tons, or 24.6 per cent, in comparison with October, 1929, and that from Europe declined 73,777 tons, or 33.8 per cent. The proportion of the tonnage from each of these areas to the total tonnage also was slightly lower in October, 1930.

Destination.—Thirty-nine and one-tenth per cent of the Pacific-bound tonnage was destined to the United States; 23.1 per cent to Asia; 16.2 per cent to South America; and 12.6 per cent to Australasia. Cargo tonnage to all these areas declined as compared with October, 1929, as follows: To the United States, 108,281 tons, or 28.4 per cent; to Asia, 28,464 tons, 15.9 per cent; to South America, 28,763 tons, or 21.4 per cent; and to Australasia, 42,204 tons, or 34 per cent. With respect to the proportion of the cargo to these various areas to the total Pacific-bound tonnage, slight increases were registered in that to Asia and South America, while that to the United States and Australasia decreased.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 54.3 per cent came from the United States; 28.1 per cent from South America; 10.1 per cent from Canada; 4.0 per cent from Asia; and 2.4 per cent from Australasia. Tonnage from Canada and Asia showed proportionate as well as actual increases of 60,757 tons, or 52.8 per cent, and 9,586 tons, or 15.7 per cent, respectively, as compared with October, 1929. Tonnage from the United States, South America, and Australasia decreased proportionately as well as in actual tonnage in the amounts of 184,077 tons, or 16.3 per cent; 127,355 tons, or 20.7 per cent; and 26,743 tons, or 39.1 per cent. Increases in the shipments of several items, particularly wheat, was the cause of the exceptionally large proportionate increase of tonnage from Canada.

Destination.—Segregated according to destination, 53.9 per cent of the cargo tonnage in this direction went to the United States, and 40.3 per cent to Europe. While slightly greater in its proportion to the total tonnage than in October, 1929, the actual tonnage to the United States decreased 129,603 tons, or 12.1 per cent. Cargo tonnage to Europe decreased in actual tonnage in the amount of 67,562 tons, or 8.8 per cent, while its proportion to the total tonnage was greater in October, 1930.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify 86 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 14 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for October, 1929, or October, 1930, are listed in the following tabulation, showing differences:

Commodity.	October, 1929.	October, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Automobiles.....	19,755	7,491	-12,264
Cement.....	36,647	14,062	-22,585
Chemicals.....	12,772	5,223	-7,549
Coal and coke.....	22,681	10,853	-11,828
Cotton.....	33,117	39,846	+6,729
Manufactured goods:			
Iron and steel.....	200,858	109,683	-91,175
Machinery.....	15,520	11,849	-3,671
Railroad material.....	13,535	7,093	-6,442
Tinplate.....	23,455	18,355	-5,100
Textiles.....	10,792	10,189	-603
Miscellaneous.....	14,591	12,524	-2,067
Metals, various.....	23,182	11,120	-12,062
Oils, mineral.....	51,371	54,924	+3,553
Paper.....	22,373	18,493	-3,880
Phosphates.....	36,597	25,469	-11,128
Sulphur.....	30,982	30,573	-409
Tobacco.....	11,317	10,664	-653

The above 17 commodity groups for October, 1930, comprise 61.3 per cent of the cargo moving from the Atlantic to the Pacific. Except for two small increases—in cotton and mineral oils—all items showed decreases as compared with October, 1929.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify over 98 per cent of all cargo moving from the Pacific to the Atlantic during the month of October, 1930. Com-

modities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1929 are listed below:

Commodity.	October, 1929.	October, 1930.	Difference.
	Long tons.	Long tons.	Long tons.
Barley.....	27,642	24,916	-2,726
Beans.....	10,983	13,559	+2,576
Canned goods (fish, fruit, vegetables, etc.).....	102,898	145,341	+42,443
Cold storage (food products) *.....	21,515	17,790	-3,725
Flour.....	10,277	11,797	+1,520
Fruit, dried.....	30,648	43,941	+13,293
Fruit, fresh.....	12,855	17,342	+4,487
Lumber.....	322,170	238,501	-83,669
Metals (principally copper).....	59,601	45,787	-13,814
Nitrates.....	274,583	138,681	-135,902
Oils, mineral.....	605,365	455,268	-150,097
Ores (principally iron).....	151,271	174,267	+22,996
Paper.....	12,683	10,740	-1,943
Rice.....	8,816	17,558	+8,742
Sugar.....	62,480	51,742	-10,738
Wheat.....	124,105	169,165	+45,060

* Fresh fruit not included.

The above 16 commodity groups comprise 90 per cent of the cargo moving from the Pacific to the Atlantic during October, 1930. Eight of the items showed increases and 8 decreases. With the exception of ores all increases were in food products. Wheat and canned goods showed the heaviest increases, while mineral oils and nitrates registered the heaviest decreases.

(Continued on next page.)

Pacific Steam Navigation Company Withdraws "Ebro" and "Essequibo."

The Pacific Steam Navigation Company has announced the temporary withdrawal from its service between New York and the west coast of South America of the passenger and freight steamers *Ebro* and *Essequibo*, effective with the northbound transit of the Canal of the *Ebro* on November 14, 1930. The *Ebro* first transited the Canal on October 28, 1919, and the *Essequibo* on July 10, 1920, and both vessels have been operating through the Canal regularly since that time.

The cargo service of this company operating between New York, Colombian, Ecuadorian, and Peruvian ports, via the Canal, in addition to its other services serving the Canal, will continue to be maintained.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending November 15, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Mataroa.....	Shaw, Savill & Albion.....	November 9.	November 9.	16	
Minden.....	North German Lloyd.....	November 9.	November 9.	36	
Heiyo Maru.....	Nippon Yusen Kaisha.....	November 11.	November 11.	137	
Taketojo Maru.....	Nippon Yusen Kaisha.....	November 11.	November 11.	144	
Vega.....	U. S. Government.....	November 11.	November 11.	143	29
Santa Inez.....	Grace Line.....	November 11.	November 11.		2
Almelo.....	Royal Netherlands S. S. Co.....	November 12.	November 12.	101	
Santa Barbara.....	Grace Line.....	November 13.	November 13.	30	
City of San Francisco.....	Panama Mail S. S. Co.....	November 13.	November 13.	122	
Patrick Henry.....	Tampa Interoccean S. S. Co.....	November 13.	November 13.	261	
Kim.....	Sverre Sturlung.....	November 13.	November 14.	5,069	
Ansgir.....	North German Lloyd.....	November 14.	November 15.	282	98
Pennsylvania.....	Panama-Pacific Line.....	November 14.	November 14.		175

Origin and Destination of Cargo Passing Through the Panama Canal from the Atlantic to the Pacific, October, 1930.—Continued from page 219.
(Figures represent tons of 2,240 pounds.)

	NORTH AMERICA.						SOUTH AMERICA.						AUSTRALASIA.						ASIA.				Grand total.	Per cent of total cargo.
	West coast of United States.	West coast of Canada.	West coast of Central America.	Balboa, C. Z. *	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America.	Total, South America.	Australia.	New Zealand.	Australasia.	Total, Australasia.	Philippine Islands.	China.	Japan.	Far East.	Total, Asia.			
NORTH AMERICA:																								
UNITED STATES—																								
North Atlantic ports.....	168,297	1,960	816	1811,280	182,350	15,193	343	558	3,277	4,306	23,677	9,950	3,532	13,482	13,624	24,271	19,765	14,493	72,156	201,665	44	9		
South Atlantic ports.....	3,217			3,217	7,760	7,603					7,603	1,869	6,142	8,011							17,874	2,7		
Gulf ports.....	29,812	7,424		37,236	2,366	101	211	224	2	2,904	1,220	5,280	3,249	9,749	13,104	42,833	8,306	64,243	114,132	1,7	15	14		
Total, United States.....	201,296	9,384	816	1811,280	222,803	17,559	444	769	3,501	4,308	26,581	11,170	8,812	3,249	23,231	13,832	39,886	64,587	23,712	142,017	414,632	63.8		
East coast of Canada.....	6,700			6,700							6,700	1,869	6,142	8,011							14,711	2.3		
East coast of Central America.....	3,089	4,133		7,260	7,606	881	662	369	348	3,016	7,603	8,502	8,502	8,502							17,874	2.7		
Cristobal, C. Z. *	4,181	20		4,201	13,409	105				13,514											10,482	1.6		
West Indies.....	204,385	20,311	6,336	1811,280	242,639	39,327	1,325	1,536	3,870	4,656	50,714	21,541	14,954	3,249	89,744	13,832	46,986	64,587	23,712	149,117	482,514	74.2		
Total, North America.....	2,586	5,434	14	8,034	1,913	14			5,535	5,554	14,016	35,259	4,000	39,259							61,309	9.4		
Europe:	11,641	3,451	273	15,712	2,307	82	911	150	1,066	4,434											20,146	3.1		
British Isles.....	80	2		3,450	237	82	50	369	389	30	369	93	93	93							82	0.6		
Belgium.....	2,562	755	139	3,492	373	886	69	394	30	1,752	373	373	373	373							3,918	0.9		
Denmark.....	2,392	543	958	4,942	1,920	31	68	1,145	52	3,216	52	52	52	52							5,664	0.9		
France.....	2,406	333	284	2,993	1,920	31	68	1,145	52	3,216	52	52	52	52							6,209	1.0		
Germany.....	2,031	621	670	2,257	39	37	474	550	37	3,012	3,033	3,033	3,033	3,033							2,787	0.4		
Holland.....	4,353	40	556	4,953	21	21				26,120	26,642	26,642	26,642	26,642							7,986	1.2		
Italy.....	1,160	75		6,915	522					26,120	26,642	26,642	26,642	26,642							215	0.5		
Norway and Sweden.....	5,403	1,422	75	6,915	522					26,120	26,642	26,642	26,642	26,642							36,419	5.7		
Spain and Portugal.....	32,584	12,621	2,113	48,539	7,332	931	1,130	7,311	37,308	54,012	35,259	6,955	42,214	35,259							144,765	22.3		
Europe.....	16,552	4,174	81	20,837	763	763				763											974	3.5		
East coast of South America.....	253,551	37,106	9,055	1,314	11,280	312,315	46,659	3,019	2,666	11,181	41,904	105,493	21,541	50,213	10,204	81,958	13,832	46,986	65,561	23,712	150,091	649,833	100.0	
Grand total.....	39.1	5.7	1.4	0.2	1.7	48.1	7.2	0.5	0.4	1.7	6.4	16.2	3.3	7.7	1.6	12.6	2.1	7.2	10.1	3.7	23.1	100.0		
Per cent of total cargo:	42.7	2.3	1.9	0.2	1.4	48.5	7.4	1.0	0.5	2.0	4.9	15.8	5.0	8.8	1.6	14.6	2.0	4.1	10.5	4.5	21.1	100.0		
October, 1930.....	42.7	2.3	1.9	0.2	1.4	48.5	7.4	1.0	0.5	2.0	4.9	15.8	5.0	8.8	1.6	14.6	2.0	4.1	10.5	4.5	21.1	100.0		
October, 1929.....	42.7	2.3	1.9	0.2	1.4	48.5	7.4	1.0	0.5	2.0	4.9	15.8	5.0	8.8	1.6	14.6	2.0	4.1	10.5	4.5	21.1	100.0		
October, 1928.....	42.7	2.3	1.9	0.2	1.4	48.5	7.4	1.0	0.5	2.0	4.9	15.8	5.0	8.8	1.6	14.6	2.0	4.1	10.5	4.5	21.1	100.0		

* General cargo not routed so as to allow segregation between definite ports. * Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, October, 1930.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										EUROPE.										Grand total.	Per cent of total cargo.						
	UNITED STATES.					CENTRAL AMERICA.					Cristobal, C. Z.²	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.			Norway and Sweden.	Spain and Portugal.	Europe.¹	Total, Europe.	East coast of South America.	Egypt.
	North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total, United States.	East coast of Canada.	East coast of Central America.																						
NORTH AMERICA.																												
West coast of U. S.	564,018	13,964	37,890	615,872	1,050	2,149	4,562	623,633	189,699	9,624	1,978	17,705	28,846	14,941	237	1,315	45	48,262	312,652	11,324	947,609	54.3						
West coast of Canada	16,791	.....	.....	16,791	17,129	51	3,164	37,135	67,044	1,694	3,050	3,805	4,558	13,123	598	4,054	3,223	39,187	137,023	1,719	175,877	10.1				
West coast Cen. Amer.	2,900	.....	.....	2,900	.....	1,242	50	3,792	.....	278	.....	.....	.....	.....	.....	.....	.....	89	3,312	.....	7,104	0.4
Hawaiian Islands	11,804	.....	.....	11,804	.....	.....	.....	11,814	.....	.....	.....	.....	.....	500	.....	.....	.....	.....	778	.....	12,582	0.7
Total, N. America.	595,113	13,964	37,890	646,967	1,129	3,442	7,776	676,304	256,743	11,506	5,028	21,510	33,404	28,564	885	5,369	3,208	87,538	453,765	13,043	1,143,172	65.5						
SOUTH AMERICA:																												
Chile	171,431	17,663	10,776	199,870	564	1,462	1,462	201,986	20,787	6,988	825	3,847	3,528	732	2,923	563	792	106,809	147,795	32	349,723	20.0						
Colombia	953	.....	.....	953	2,441	119	3,513	21,343	384	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,517	0.2
Ecuador	21,343	.....	.....	21,343	2,966	42	24,351	69,439	15,645	811	2,264	541	2,653	10	10,122	550	12,086	44,682	.....	.....	24,735	1.4		
Peru	28,961	.....	.....	28,961	179	6	69,439	15,645	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	105,121	6.2
W. coast of S. America¹	2,958	2,000	.....	4,958	1,313	46	5,417	.....	.....	.....	.....	.....	.....	139	.....	.....	.....	.....	.....	.....	6,310	0.3
Total, S. America.	224,740	19,663	10,776	255,185	31,293	7,463	1,675	295,616	36,816	7,799	3,089	4,388	6,252	743	3,062	10,685	1,342	119,578	193,754	36	489,406	28.1						
AUSTRALASIA:																												
Australia	8,238	.....	.....	8,238	2,814	.....	11,052	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11,055	0.6
New Zealand	996	.....	.....	996	88	27	1,111	22,431	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23,542	1.4
Australasia¹	9,234	.....	.....	9,234	2,902	.....	12,163	29,461	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	27,030	0.4
Total, Australasia.	9,234	.....	.....	9,234	2,902	.....	12,163	29,461	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	41,627	2.4
ASIA:																												
Philippine Islands	15,740	.....	.....	15,740	.....	.....	22,140	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22,140	1.2
China	2,519	.....	.....	2,519	346	.....	2,865	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,865	0.2
Japan	1,707	.....	.....	1,707	.....	.....	1,707	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,707	0.1
Far East¹	2,144	.....	.....	2,144	106	22	14,136	16,468	26,241	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43,640	2.5
Total, Asia.	22,110	.....	.....	22,110	6,400	28,510	43,180	26,241	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	70,352	4.0
Grand total	851,203	33,627	55,066	939,896	51,324	1,210	11,300	23,587	1,027	323,319	291,305	8,117	25,898	39,656	29,307	3,897	16,054	4,610	297,116	703,221	14,013	1,744,557	100.0					
Per cent of total cargo:																												
October, 1930	48.8	1.9	3.2	53.9	2.9	0.1	0.6	1.4	58.9	20.0	1.1	0.5	1.5	2.3	1.7	0.2	0.9	0.3	11.8	40.3	0.8	100.0						
October, 1929	48.7	0.9	3.9	53.5	4.9	0.6	1.2	60.2	16.7	0.6	0.2	1.6	2.5	0.8	1.2	1.5	0.3	13.2	38.6	0.7	100.0							
October, 1928	44.9	1.4	3.2	49.5	3.1	0.7	1.5	56.3	18.4	0.8	0.2	2.4	2.8	2.1	1.1	0.3	2.0	11.5	41.8	0.5	100.0							

¹ Includes both local and transit cargo.

² General cargo not routed so as to allow segregation between definite ports.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, November 15, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Manzales	8	17	55	9	6	00	9	14	50	German	216.5	32.9	12.0	Cristobal, C. Z.	Guayaquil, Equad ^r	General	67	1,132	741
Manatawny	8	19	50	9	14	33	9	16	00	American	390.0	54.2	24.0	Amsterdam, Holl ^d	Long Beach, Calif	Crossite	4,102	6,205	4,339
Chinese	8	22	15	9	15	24	9	16	23	British	441.0	60.0	20.0	New York, N. Y.	Shanghai, China.	General	2,122	9,284	6,265
Prinze	8	22	25	9	17	25	9	17	25	American	399.7	56.2	24.0	Baltimore, Md.	Seattle, Wash.	Steel, general.	6,137	7,381	5,595
Akamar	8	22	40	9	18	00	9	18	00	American	409.0	53.0	18.0	Boston, Mass.	Portland, Oreg.	General	3,347	7,156	5,094
Dakotan	8	22	40	9	17	50	9	17	50	American	231.0	21.1	11.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast	2094	1,633	1,041
S-10	8	13	55	9	9	45	9	19	22	German	226.0	34.0	13.3	Cristobal, C. Z.	Guayaquil, Equad ^r	General	2,156	8,878	6,888
Durazzo	9	00	15	9	10	40	9	18	30	British	450.0	58.0	20.1	Rotterdam, Holl ^d	Portland, Oreg.	Gen., clay, coke	1,233	11,170	8,208
Nebraska	9	00	15	9	10	40	9	18	30	British	481.0	62.3	20.6	New York, N. Y.	Dunedin, N. Z.	General	8,098	7,611	5,450
Port Hunter	9	3	50	9	11	18	9	23	48	British	424.0	56.0	26.0	Baltimore, Md.	Tacoma, Wash.	General, steel	4,614	6,624	4,883
Chatanooga	9	11	20	9	19	48	10	2	10	American	400.5	54.0	20.0	Philadelphia, Pa.	Seattle, Wash.	General	7,426	5,073	
City	9	12	25	9	20	26	9	21	52	American	435.6	56.2	25.0	Bayonne, N. J.	Los Angeles, Calif	Ballast	6,406	4,336	
Pacific Fir	9	22	50	10	13	23	10	14	45	American	408.0	57.3	15.0	Preston, Cuba.	Los Angeles, Calif	Ballast	1,750	8,586	6,605
Antietam	10	6	30	10	7	15	10	14	10	Norwegian.	433.0	57.4	23.0	New York, N. Y.	Adelaide, Australia	General	1,753	7,621	5,470
Svalder	10	7	55	10	15	42	10	23	25	British	463.0	60.0	18.0	Newport News, Va.	Los Angeles, Calif	Ballast	3,851	8,219	5,861
City of Derby	10	9	10	10	10	17	10	17	58	American	454.7	54.1	23.0	New York, N. Y.	Shanghai, China.	General	1,048		
Salinas	10	9	10	10	10	17	10	17	58	British	425.0	58.0	19.6	New York, N. Y.	Colombo, Ceylon	General	7,684	7,611	5,450
Jason	10	15	55	10	16	05	10	23	09	British	390.0	54.2	18.2	Hampden Rds., Va.	Mare Island, Calif	Navy stores.	3,023	9,262	6,853
Silverash	10	15	55	10	16	05	10	23	09	American	149.3	30.0		Cristobal, C. Z.	Balboa, C. Z.	Towing barge 2.	5,076	6,961	5,365
Vega	10	17	35	11	6	05	11	14	15	American	467.6	62.7	22.0	New York, N. Y.	Los Angeles, Calif	Ballast	2,862	6,982	4,894
Scolta	10	21	05	11	7	25	11	15	10	American	375.8	51.4	22.0	Oslo, Norway	Corral, Chile	General	5,253	9,893	6,925
Sylvan Arrow	10	23	10	11	9	50	11	16	20	Norwegian.	404.0	53.9	19.0	Hamburg, Germany	Corral, Chile	General	2,354	6,779	4,921
G. C. Brovig	11	12	00	11	12	10	11	22	38	Norwegian.	447.4	62.0	24.9	New York, N. Y.	Seattle, Wash.	General	5,901	9,655	6,849
Indra	11	12	00	11	13	25	11	20	20	American	424.0	56.0	26.6	Philadelphia, Pa.	Belawan Deli, Sum.	General	7,684	7,611	5,450
Kansan	11	17	50	11	13	25	11	21	18	Dutch.	448.9	60.2	19.0	Boston, Mass.	Seattle, Wash.	General	3,023	9,262	6,853
Amsel	11	17	50	11	13	25	11	21	18	American	381.6	53.8	12.0	Alexandria, Egypt	San Francisco, Cal.	Ballast	6,289	4,723	
Steel Trader	11	21	00	12	6	15	12	14	10	American	400.5	54.5	21.0	San Francisco, Cal.	San Francisco, Cal.	Coke	2,862	6,982	4,894
Harry	12	6	05	12	7	25	12	14	42	American	425.0	55.0	21.9	Havre, France	Corral, Chile	Iron, pipes, gen.	2,156	10,687	6,633
Luckenbach.	12	6	05	12	7	25	12	14	42	American	478.0	63.0	27.6	Glasgow, Scotland	Auckland, N. Z.	General	4,810	11,070	9,921
Hoyanger	12	9	10	12	15	10	12	18	36	Norwegian.	396.2	55.0	21.7	Baton Rouge, La.	Balboa, C. Z.	Naphtha	4,178	6,363	4,386
Bradlyne	12	9	10	12	15	10	12	18	36	Norwegian.	400.0	52.0	23.1	Montreal, Canada.	Auckland, N. Z.	General	3,027	9,456	6,172
Zenon	12	11	35	12	17	30	12	19	30	French	440.0	57.0	23.0	New York, N. Y.	Yokohama, Japan.	Cotton, phosph ^{te} .	5,077	8,158	5,676
Santa Barbara	12	17	35	12	20	13	12	21	30	American	400.5	54.5	21.0	San Francisco, Cal.	San Francisco, Cal.	Coke	2,862	6,982	4,894
Raranga	12	17	35	12	20	13	12	21	30	British	478.0	63.0	27.6	Glasgow, Scotland	Auckland, N. Z.	General	4,810	11,070	9,921
Kim	8	13	20	13	6	25	13	14	34	Norwegian.	396.2	55.0	21.7	Baton Rouge, La.	Balboa, C. Z.	Naphtha	4,178	6,363	4,386
Canadian	12	20	10	13	7	20	13	15	30	British	400.0	52.0	23.1	Montreal, Canada.	Auckland, N. Z.	General	3,027	9,456	6,172
Victor	12	23	10	13	8	20	13	15	32	Japanese.	440.0	57.0	23.0	New York, N. Y.	Yokohama, Japan.	Cotton, phosph ^{te} .	5,077	8,158	5,676
Atago Maru	12	23	10	13	8	20	13	15	32	Japanese.	440.0	57.0	23.0	New York, N. Y.	Yokohama, Japan.	Cotton, phosph ^{te} .	5,077	8,158	5,676

¹ Tanker. ² Submarine. ³ Motor ship. ⁴ Supply ship. ⁵ Tug.

Camden	13	19.40	13	20.35	14	9.20	14	10.23	British	400.0	52.0	17.0	Quebec, Canada	Victoria, B. C.	3,590	5,892	4,186	
Miller	13	6.35	14	6.15	14	14.29	14	15.30	French	411.0	53.0	25.7	Dunkirk, France	Noumea, New Cal.	3,694	7,603	5,629	
Ville de Verdun	13	22.05	14	6.25	14	15.00	14	16.12	American	446.0	66.0	29.0	Mobile, Ala.	Tacoma, Wash.	4,144	8,508	6,179	
F. J.	14	4.25	14	7.30	14	16.18	14	22.40	American	592.0	52.0	22.0	New York, N. Y.	San Francisco, Cal.	4,136	12,512	9,178	
Luckenbach	14	6.05	14	7.30	14	15.23	14	19.24	American	593.4	80.3	26.0	New York, N. Y.	San Francisco, Cal.	4,148	25,262	18,194	
President	14	2.10	14	8.20	14	18.00	14	19.30	American	259.0	45.0	19.3	Chester, Pa.	San Francisco, Cal.	2,317	2,676	1,797	
Adams	14	7.30	14	9.00	14	17.12	14	18.35	British	407.4	52.0	20.7	Philadelphia, Pa.	Auto parts	6,046	4,326		
Pennsylvania	14	7.40	14	9.45	14	18.48	14	20.69	British	499.8	64.0	19.7	Liverpool, England	Ballast	11,673	8,143		
Lake Benbow	14	9.30	14	10.30	14	19.18	14	21.45	Norwegian	385.3	54.8	14.2	New York, N. Y.	Ballast	6,615	4,859		
El Clervo	14	12.30	14	12.45	14	20.13	14	1.45	Swedish	516.0	72.0	30.3	Baltimore, Md.	Ballast	15,560	4,496		
Dorset	14	19.55	14	12.20	14	20.36	14	11.37	Colombian	116.0	21.0	10.3	Cristobal, C. Z.	General	167	121		
Ferret	13	21.50	14	13.20	14	20.38	14	22.10	British	405.0	55.0	12.3	Antwerp, Belgium	Ballast	7,042	5,208		
Forrest	13	22.50	14	14.35	14	21.48	15	16.05	German	393.0	40.0	22.5	Bremen, Germany	Los Angeles, Calif	4,470	6,542	4,532	
Winnipeg	14	14.35	14	14.50	14	21.51	15	00.04	American	419.5	56.5	21.0	New York, N. Y.	Valparaiso, Chile	1,600	7,060	5,025	
Keelua Maru	15	5.00	15	6.20	15	12.35	15	13.55	British	290.0	47.1	17.0	Cristobal, C. Z.	San Francisco, Cal.	1,921	2,597	1,587	
East Lynn	15	6.20	15	8.15	15	15.21	15	16.50	Japanese	335.0	51.0	21.9	Champertoo, Guat.	General	4,746	6,213	4,670	
Rhodops	15	2.05	15	11.45	15	15.21	15	19.59	British	401.1	54.3	25.0	Tampa, Florida	Cotton, rosin.	7,512	6,784	5,107	
San Simeon	15	9.55	15	13.40	15	19.41	15	21.00	American	410.0	54.3	18.5	Hamburg, Germany	General	3,854	7,525	5,154	
Western Sun	15	12.05	15	13.40	15	20.44	15	22.35	American	480.6	66.0	27.0	Chester, Pa.	General	2,733	6,573	4,016	
Oregonian	15	18.00	15	19.40	16	11.22	16	12.45	American	494.0	52.0	19.0	Boston, Mass.	Los Angeles, Calif	2,972	9,607	6,551	
														Portland, Ore.	General	6,754	4,800	

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Caroline	9	5.00	9	6.42	9	17.20	9	17.20	Danish	456.8	59.2	27.0	Los Angeles, Calif	Curacao, D. W. I.	11,220	8,102	5,685
Maersk	9	5.30	9	7.15	9	17.10	9	18.00	French	413.7	56.9	24.0	Noumea, New Cal.	Dunkirk, France	2,910	7,643	5,364
Antinos	9	6.20	9	8.17	9	18.05	9	18.05	Spanish	359.7	41.9	24.5	Tocopilla, Chile	Azores	6,100	4,460	3,090
Cobetas	9	8.40	9	9.65	9	16.45	9	16.45	Panamanian	48.0	11.6		Ballboa, C. Z.	Nitrate of soda.	27	20	
Rolling Stone	9	9.00	9	9.59	9	18.59	9	18.59	American	467.0	61.7	27.0	Los Angeles, Calif	Cristobal, C. Z.	11,672	9,700	6,804
Broad Arrow	9	10.50	9	11.29	9	20.15	9	20.15	British	290.0	41.7	15.1	Champertoo, Guat	New York, N. Y.	331	2,597	1,587
Champertoo	9	4.45	9	12.25	9	20.55	9	20.55	British	500.4	63.2	24.0	Timaru, N. Z.	Cristobal, C. Z.	4,300	13,590	9,233
Mataro	8	22.45	9	13.13	9	20.55	9	20.55	Colombian	150.0	27.2	7.3	London, England	Frozen, general	5,625	4,410	307
Floreana	9	11.10	9	14.45	9	21.45	9	21.45	Swedish	330.0	50.0	23.3	Tocopilla, Chile	Riohacho, Colom.	5,625	4,410	307
Innaren	9	1.09	9	15.24	9	22.30	9	22.30	German	380.7	50.1	13.0	Champertoo, Guat.	Nitrate of soda.	4,822	3,272	
Minden	9	17.50	9	18.45	10	11.45	10	11.45	American	409.7	54.2	24.0	Seattle, Wash	Bremen, Germany	7,917	6,680	4,916
Pacific	9	18.20	10	6.05	10	13.50	10	13.50	American	416.8	56.1	26.0	Los Angeles, Calif	Lumber, general	8,257	6,775	4,916
Hemlock	10	7.20	10	7.20	10	14.30	10	14.30	American	325.0	55.0	11.2	Ballboa, C. Z.	Gasoline	3,497	2,067	
New York	10	7.38	10	7.38	10	14.35	10	14.35	Veuzuelan	155.0	30.0		Ballboa, C. Z.	Ballast	7,123	9,936	6,561
Sciota	10	5.40	10	7.58	10	15.25	10	22.40	American	485.0	58.0	29.0	Cristobal, C. Z.	Towing barge	15,860	11,573	7,711
Orta	10	7.10	10	8.20	10	19.50	10	20.40	British	510.2	68.2	31.0	Margallanes, Chile.	General	3,582	6,870	4,909
Vancouver	10	11.25	10	12.17	10	19.50	11	2.45	British	400.3	52.3	23.0	Lobitos, Peru	Crude oil	8,600	3,983	2,629
Viking Star	10	16.50	10	17.17	11	10.50	11	10.50	British	324.0	46.6	24.0	Seattle, Wash	Frozen, general	3,601	8,201	6,207
Sawier	10	18.50	10	19.31	11	11.25	11	11.25	American	410.0	56.0	28.0	San Francisco, Cal.	Lumber, general	8,991	8,201	6,207
Tiger	10	12.05	11	6.09	11	13.00	11	14.00	American	574.4	80.3	29.0	Los Angeles, Calif	Gas oil	6,950	24,506	17,565
California	10	12.05	11	6.09	11	13.00	11	14.00	American	574.4	80.3	29.0	San Francisco, Cal.	General			

* For orders.

⁶ Motor ship.

¹ Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.			
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.		
R. J. Hanna	10	23	11	6	11	6	11	14	35	American	Standard Oil Co. of Cal.	435	0	56	2	26	0	0	0	0	
Antions	10	21	11	7	16	11	11	17	30	British	Andrew Weir & Co.	401	6	54	3	24	0	0	0	0	
Indian City	11	7	11	8	17	10	11	17	45	British	Reardon Smith Line	411	7	54	5	26	0	0	0	0	
Santa Inez	11	6	11	9	18	11	11	22	40	American	Grace Line	370	0	53	2	21	0	0	0	0	
Taketoyo Maru	11	6	11	11	18	20	11	22	40	Japanese	Nippon Yusen Kaisha	445	0	58	0	25	2	0	0	0	
Mary D	11	13	11	11	19	35	11	19	35	American	Strange & Co.	380	2	53	1	24	0	0	0	0	
Waziristan	11	3	11	10	19	35	11	20	40	British	Common Brothers Ltd.	390	0	52	5	24	5	0	0	0	
Vinevor	11	12	11	13	23	11	22	40	11	23	55	British	W. Rumsiman & Co.	375	0	53	5	25	0	0	0
Arizona	11	13	11	13	23	11	23	30	American	Amer-Hawaiian Line	434	3	57	2	26	0	0	0	0		
Winnocote	11	16	11	10	14	12	11	30	12	12	25	British	W. A. Young & Co.	346	0	49	5	24	0	0	
Lilliana	11	17	10	11	18	03	12	11	40	12	11	00	American	Luckenbach Line	443	9	60	2	30	0	0
Steel Worker	11	22	12	6	28	12	13	10	12	13	10	American	E. C. Evans & Sons	424	2	56	2	25	0	0	
Ovalhead	11	17	10	12	6	43	12	14	30	12	14	30	American	Arrow Line	409	7	54	2	24	0	0
Christenson	11	23	12	7	18	12	15	05	12	18	22	American	Anglo-Saxon Post. Co.	427	3	53	3	24	0	0	
Adair	11	23	12	7	18	12	15	35	12	17	15	British	Sir W. R. Smith & Sons	411	8	54	5	27	6	0	
Jersey City	12	2	12	7	46	12	15	35	12	17	15	British	North German Lloyd	428	7	54	5	25	9	0	
Gottingen	12	9	12	8	20	12	16	30	12	17	10	German	Sir W. R. Smith & Sons	400	5	54	3	24	6	0	
King City	12	10	12	10	24	12	17	30	12	17	30	British	Transatlantic S. S. Co.	378	0	54	2	23	6	0	
Roxen	12	13	12	13	03	12	22	15	12	22	30	Swedish	Johnson Line	440	0	56	0	26	0	0	
Canada	12	23	13	6	29	13	13	49	13	18	50	Swedish	Standard Transp. Co.	435	0	56	0	26	0	0	
Acme	12	30	13	6	26	13	13	30	13	18	30	American	French Line	417	8	55	9	26	0	0	
Indiana	12	2	13	6	35	13	15	10	13	3	17	French	Le Havre, France	417	8	55	9	26	0	0	
Flouence	12	30	13	8	14	13	15	40	13	15	40	American	Luckenbach Line	401	8	52	2	21	0	0	
Luckenbach	12	30	13	8	22	13	15	05	16	6	05	Dutch	Royal Nath S. S. Co.	202	9	33	1	12	7	0	
Bral	12	30	13	9	10	13	17	25	16	6	05	American	M. Cornick S. S. Co.	409	6	54	1	25	7	0	
Albaroka	12	10	13	9	10	13	17	25	16	50	American	Tidewater Assn. Tr. Co.	480	6	68	0	29	0	0		
Thruwater	12	10	13	11	29	13	19	10	13	21	50	American	States S. S. Co.	410	0	54	4	24	0	0	
San Clemente	12	10	13	11	36	13	20	05	13	30	05	American	Standard Transp. Co.	468	3	62	2	28	6	0	
Sapan Arrow	12	13	13	14	36	13	22	15	13	21	45	American	Nav. Libera-Triestine Co.	439	6	60	4	26	0	0	
Patrick Henry	12	17	13	15	25	13	22	25	14	10	20	American	Hamberg-American Line	436	6	59	5	26	9	0	
Osaka	12	17	13	18	01	14	11	25	14	16	25	Italian	Trieste, Italy	451	3	65	0	21	0	0	
Oakland	12	23	13	18	01	14	11	29	15	15	15	German	Hamburg-Germany	436	6	59	5	26	9	0	
Elbro	12	23	13	4	49	14	11	35	14	13	35	Norwegian	Anglo-Saxon Post. Co.	460	5	59	5	26	9	0	
Elbro	12	30	14	7	01	14	12	35	14	13	35	British	Anglo-Saxon Post. Co.	460	5	59	5	26	9	0	
King Edwin	12	30	14	8	29	14	18	25	14	20	25	British	Dodd, Thompson & Co.	400	0	54	8	23	8	0	
Cering	12	30	14	9	29	14	18	00	14	20	25	British	Hamberg-American Line	297	2	64	13	6	0		
San Juan	12	30	14	10	02	14	19	00	14	19	00	American	Standard Transp. Co.	480	6	68	0	28	6	0	
Felix Tausaig	12	30	14	11	07	14	19	33	14	19	33	American	Mystic S. S. Co.	395	0	55	1	27	0	0	

* Nitrates, coffee, and beans.

* Motor ship.

* Tanker.

Origin	Destination	Company	Agent	Weight	Value
Ohioan	General	6,553	4,030		
Appledore	Wheat	8,901	5,218		
Lochkatrine	General	8,992	9,409		
Ruahine	Frozen, general	3,667	10,869		
Texas	Pr. Arthur, Tex.	7,583	6,377		
Loreto	General gasoline	7,470	6,725		
Fisher	Ballast		70		
Laesie I	Ballast		70		
Almirante	Lumber	7,111	6,736		
Guldborg	Coffee	145	238		
Cauca	Wheat	8,250	6,042		
Badjestan	Wheat				
Amberton	Wheat	8,020	5,756		

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Date	Vessel	Line	From	Date	Vessel	Line	For
November 9	Costarica	Royal Netherlands S. S. Co.	Hamburg via waypts.	November 9	No. 9085 ¹⁵	Pan American Airways	San Salvador and waypts.
November 9	Guadeloupe	French Line	St. Nazaire via waypts.	November 9	No. 300-N ¹⁵	Pan American-Grace Airways	Talara via wayports.
November 9	Tolosa	United Fruit Co.	Port Limon, Costa Rica.	November 9	No. 9776 ¹⁵	Pan American Airways	Miami via wayports.
November 9	Deary	U. S. Navy	Tela, Honduras.	November 9	Camden	United Fruit Co.	Port Limon and Curacao.
November 9	Dora K.	A. L. Surgeon	Tampa, Fla., U. S.	November 9	Costarica	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
November 10	August Thyssen	Aluminum Line	New York, N. Y.	November 9	Toto	United Fruit Co.	New York via Kingston.
November 10	N. R. 101	Pure Oil Co.	Barranquilla and waypts.	November 9	Ancon	Panama R. S. S. Line	New York via Haiti.
November 10	Pastores	United Fruit Co.	San Salvador and waypts.	November 10	Dora K.	Aluminum Line	Bluefields and Ft. Limon.
November 10	No. 9085 ¹⁵	Pan American Airways	San Salvador and waypts.	November 10	August Thyssen	French Line	Maracaibo, Venezuela.
November 11	Escaple Fuego	Connolly & Papi	San Salvador and waypts.	November 10	Guadeloupe	Pan American Airways	Havre via wayports.
November 11	No. 300-N ¹⁵	Pan American-Grace Airways	Talara via wayports.	November 12	No. 9070 ¹⁵	Pan American Airways	Miami via wayports.
November 12	Metapan	United Fruit Co.	Bluefields, Nicaragua.	November 12	No. 142-M ¹⁵	United Fruit Co.	Port Limon, Costa Rica.
November 12	No. 9685 ¹⁵	Pan American Airways	San Salvador and waypts.	November 12	Pastores	Pan American Airways	Curacao and wayports.
November 12	No. 9776 ¹⁵	Pan American Airways	Miami via wayports.	November 13	Metapan	United Fruit Co.	Port Limon via wayports.
November 13	Irona	United Fruit Co.	New Orleans, La.	November 13	Escaple Fuego	Connolly & Papi	Bluefields, Nicaragua.
November 13	Bridgetown	Colombian S. S. Line	Miami via waypts.	November 13	Bridgetown	Colombian S. S. Line	New York via Kingston.
November 13	U. S. Ashville	U. S. Navy	Miami via wayports.	November 14	No. 9088 ¹⁵	Pan American Airways	San Salvador and waypts.
November 14	Leyland	Standard Fruit & S. S. Co.	Bluefields, Nicaragua.	November 14	Darien C-35 ¹⁵	Standard Airplane Co.	Barranquilla and waypts.
November 14	Anapala	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	November 15	Inapacuna ¹⁷	A. Tagaropoulos	Colon, Rep. of Panama.
November 15	Costarica	Aluminum Line	Port Limon, Costa Rica.	November 15	Nueva Espana ¹⁷	Diez & Garcia	Colon, Rep. of Panama.
November 15	Sparholm	Hamburg-American Line	Houston via New Orleans.	November 15	La Esfera ¹⁶	Alfred Howel	Port Limon, Costa Rica.
November 15	Tentonia	Pan American Airways	Tampico via wayports.	November 15	Dorelian	Leyland S. S. Line	Cartagena, Colombia.
November 15	No. 309-N ¹⁵	Pan American Airways	La Guayra via wayports.	November 15	Amapala	Standard Fruit & S. S. Co.	New Orleans and waypts.
November 15	No. 9437 ¹⁵	Pan American Airways	Miami via wayports.	November 15	Sparholm	Aluminum Line	Cartagena, Colombia.
November 15	No. 9670 ¹⁵	Pan American Airways	San Salvador and waypts.	November 15	Tentonia	Hamburg-American Line	Cartagena, Colombia.

* ARRIVALS.

* DEPARTURES.

¹² Tanker.

¹³ Launch.

¹⁴ Motor ship.

¹⁵ Air mail carrier.

¹⁶ Motor schooner.

¹⁷ Motor boat.

* Other than ships passing through the Canal.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.				* DEPARTURES.			
* ARRIVALS.		From—		Date.	Vessel.	Line.	For—
Date.	Vessel.	Line.	Talara via wayports, Colón, Rep. of Panama, Colón, Rep. of Panama, Colón, Rep. of Panama, Colón, Rep. of Panama.	November 15.	Irióna	United Fruit Co.	New Orleans and waypts.
November 15.	No. 945-N ¹⁸	Pan American-Grace Airways					
November 15.	Anchicoma ¹⁹	United Fruit Co.					
November 15.	Inapacuma ¹⁹	A. Tagaropoulos					
November 15.	Nueva Espana ¹⁹	Díaz & Garcés					
November 15.	La Estera ²⁰	Alfred Howell					
¹⁸ Air mail carrier. ¹⁹ Motor boat. ²⁰ Motor schooner.							
PORT OF BALBOA.							
November 11.	Hayyo Maru ²¹	Nippon Yusen Kaisha	Hongkong, China.	November 11.	Hayyo Maru ²¹	Nippon Yusen Kaisha	Valparaiso, Chile
November 13.	City of San Francisco ²¹	United Fruit Co.	San Francisco, Calif.	November 14.	City of San Francisco ²¹	Panama Mail S. S. Co.	Buenaventura, Colombia.
November 14.	San Jose ²⁰	A. Valdez	San Francisco, Calif.	November 15.	San Jose ²⁰	United Fruit Co.	Sau Francisco
November 14.	Liberator ²⁰	Panama Bay, R. P.	Panama Bay, R. P.	November 14.	Liberator ²⁰	A. Valdez	Panama Bay, R. P.
November 14.	Des Hermanos ²⁰	Panama Bay, R. P.	Panama Bay, R. P.	November 14.	Des Hermanos ²⁰	A. Valdez	Panama Bay, R. P.
November 14.	Sambu ²⁰	Panama Bay, R. P.	Panama Bay, R. P.	November 14.	Sambu ²⁰	Hans Elliot	Panama Bay, R. P.
November 14.	El Sona ²⁰	Panama Bay, R. P.	Panama Bay, R. P.	November 14.	El Sona ²⁰	Hans Elliot	Panama Bay, R. P.
November 14.	Real ²⁰	Panama Bay, R. P.	Panama Bay, R. P.	November 15.	Real ²⁰	Hans Elliot	Panama Bay, R. P.

* Other than ships passing through the Canal.

²¹ Motor ship.

Commercial Traffic Through the Panama Canal in October, 1930, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of October, 1930, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for October, 1929 and 1928. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States.....	72	411,599	310,114	501,508	309,719	\$350,077.84	177,509
Europe to west coast Canada:							
British.....	26	138,723	99,623	159,640	97,977	102,962.11	8,953
Danish.....	2	11,004	9,445	13,563	9,465	9,398.61	2,899
Dutch.....	1	8,351	6,201	10,155	6,337	7,751.25	3,549
French.....	3	19,808	11,807	21,682	12,572	14,758.75	3,763
German.....	4	26,584	17,628	29,490	17,981	21,461.10	10,571
Italian.....	2	12,107	10,451	13,603	8,660	10,005.25	2,184
Norwegian.....	3	16,633	12,803	20,467	12,817	16,003.75	14,320
Swedish.....	1	4,919	2,890	4,960	3,665	3,612.50	4,120
Total.....	42	238,129	170,848	273,560	169,474	185,953.32	50,359
East coast of United States to west coast of South America:							
British.....	6	26,575	21,841	38,136	22,263	20,912.88	4,227
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	1,581
Danish.....	1	4,569	2,709	4,472	2,732	3,386.25	2,750
Swedish.....	1	4,496	3,743	15,337	4,385	3,237.12	.....
United States.....	11	48,286	35,713	65,253	35,613	40,455.25	19,028
Total.....	20	88,598	67,439	130,508	68,969	72,282.75	27,586
East coast of United States to Far East:							
British.....	6	34,721	21,009	35,520	21,086	26,261.25	35,871
Japanese.....	7	36,725	31,027	46,511	30,685	38,627.65	42,752
Norwegian.....	3	13,207	7,442	12,934	7,468	9,302.50	12,360
United States.....	4	23,041	16,342	24,837	15,327	20,427.50	29,776
Total.....	20	107,694	75,820	119,802	74,566	94,618.90	120,759
Europe to west coast of South America:							
British.....	4	25,454	19,791	33,296	20,488	23,011.39	11,586
Chilean.....	1	3,528	2,153	4,170	2,441	2,691.25	487
Danzig.....	1	6,310	5,346	8,940	5,050	4,543.20	.....
Dutch.....	3	18,763	10,551	18,031	10,901	13,188.75	7,342
French.....	1	4,301	3,683	5,791	3,589	4,603.75	7,682
German.....	4	20,323	15,845	25,213	15,396	19,806.25	15,091
Greek.....	1	3,429	2,231	3,536	2,223	2,468.88	.....
Italian.....	1	7,516	5,514	12,003	6,058	6,892.50	1,358
Norwegian.....	1	3,965	2,637	4,436	2,664	3,296.25	6,703
Spanish.....	3	8,272	6,993	10,739	6,671	6,880.36	4,900
Total.....	20	101,861	74,744	126,155	75,481	87,382.58	55,149
Europe to west coast of United States:							
British.....	7	37,407	28,512	47,148	28,531	26,638.98	.....
Danish.....	1	4,418	3,585	5,702	3,583	3,180.96	.....
Italian.....	1	4,421	3,764	6,107	3,883	3,183.12	.....
Norwegian.....	3	16,604	13,913	22,930	13,736	11,954.88	.....
United States.....	3	21,373	17,093	27,473	16,920	15,388.56	.....
Total.....	15	84,223	66,867	109,360	66,653	60,346.50	.....
Cristobal to west coast of South America:							
Colombian.....	4	574	554	880	550	673.70	590
Dutch.....	2	1,484	588	1,560	646	735.00	119
German.....	4	3,491	2,260	4,347	2,334	2,825.00	705
Total.....	10	5,549	3,402	6,787	3,530	4,233.70	1,414

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of United States to west coast of Canada:							
British	3	13,463	9,151	14,778	9,195	\$10,671.12	7,219
Norwegian	2	9,331	6,537	9,077	5,461	6,561.56	.....
United States	4	18,301	12,398	20,217	12,360	15,497.50	22,055
Total	9	41,095	28,086	44,072	27,016	32,730.18	29,274
East coast of United States to Australia:							
British	5	30,355	19,851	31,940	19,910	24,813.75	11,982
Norwegian	2	7,205	4,464	7,597	4,495	5,580.00	11,750
United States	1	5,241	3,763	5,881	3,664	4,703.75	1,500
Total	8	42,801	28,078	45,418	28,069	35,097.50	25,232
Europe to Australasia:							
British	6	49,758	35,110	60,715	36,740	43,887.50	39,259
French	1	5,472	4,777	6,037	3,747	5,971.25	2,955
Total	7	55,230	39,887	66,752	40,487	49,858.75	42,214
East coast of United States to Philippine Islands:							
British	2	11,311	7,096	12,587	7,281	8,870.00	10,320
Danish	1	2,180	1,724	2,925	1,748	2,155.00	2,900
Norwegian	1	7,063	4,017	6,744	4,109	5,021.25	2,881
United States	1	6,525	4,832	7,621	4,832	6,040.00	7,557
Total	5	27,079	17,669	29,877	17,970	22,086.25	23,658
Canadian intercoastal:							
British	3	12,398	9,719	16,100	9,984	10,056.94	2,200
United States	1	4,284	3,071	5,031	3,106	3,838.75	4,500
Total	4	16,682	12,790	21,131	13,090	13,895.69	6,700
Foreign vessels in Ballast—United States intercoastal:							
British	1	6,386	5,524	8,780	5,145	4,597.92	.....
Danish	1	5,064	2,750	4,732	2,865	3,437.50	.....
French	1	5,072	4,392	6,795	494	3,651.84	.....
Norwegian	1	5,531	4,682	7,614	4,563	3,982.32	.....
Total	4	22,053	17,348	27,921	16,667	15,669.58	.....
Cristobal to west coast of United States:							
United States	3	7,103	5,408	8,972	5,299	4,928.75	1,335
East coast of South America to west coast of Canada:							
Norwegian	1	5,131	2,906	4,884	3,004	2,632.50	6,054
United States	2	10,060	7,095	11,130	7,074	8,868.75	13,574
Total	3	15,191	10,001	16,014	10,078	12,501.25	19,628
Around the world:							
United States	3	26,956	18,766	31,531	18,733	23,457.50	11,099
East coast of Canada to Australasia:							
British	2	9,633	7,657	12,626	7,749	9,571.25	8,011
West Indies to west coast of Central America:							
British	2	1,381	1,288	2,019	1,241	1,013.02	20
South American intercoastal:							
British	1	806	424	944	482	530.00	138
Colombian	1	307	302	405	308	368.40	625
Total	2	1,113	726	1,349	790	898.40	763
Cristobal to west coast of United States:							
British	2	2,293	1,920	3,703	2,065	2,400.00	1,667
East coast of United States to Hawaii:							
United States	1	1,646	1,614	1,748	1,624	1,975.20	2,396
East coast of Canada to west coast of South America:							
British	1	7,648	6,391	11,410	5,688	5,506.56	.....

ATLANTIC TO PACIFIC.—Continued.

Nationality.	Tons of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of Central America to west coast of South America:							
British.....	1	3,892	3,363	5,582	3,370	\$4,203.75	7,603
East coast of Central America to Australasia:							
British.....	1	4,852	2,927	4,815	2,948	3,658.75	6,501
Central American intercoastal:							
Norwegian.....	1	2,080	1,305	2,166	1,298	1,631.25	1,769
East coast of South America to Far East:							
Japanese.....	1	5,821	4,170	7,267	4,387	5,212.50	3,128
West Indies to west coast of United States:							
Norwegian.....	1	5,132	4,382	7,356	4,367	3,695.04	.....
West Indies to west coast of Canada:							
British.....	1	2,207	1,239	2,338	1,249	1,548.75	4,154
West Indies to west coast of South America:							
United States.....	1	7,363	7,178	9,621	7,171	8,835.60	13,392
West Indies to Far East:							
British.....	1	4,497	4,499	4,698	2,844	5,396.40	7,100
Europe to west coast of Central America:							
German.....	1	3,272	2,565	4,165	2,547	3,206.25	1,433
Cristobal to Balboa:							
Panamanian.....	1	20	15	20	16	14.40	.....
Grand total, October, 1930...	265	1,354,693	998,506	1,640,251	995,155	1,123,888.16	649,853
Grand total, October, 1929...	277	1,394,206	1,049,506	1,728,277	1,050,939	1,195,727.56	848,347
Grand total, October, 1928...	306	1,381,688	1,050,917	1,718,872	1,048,282	1,190,585.26	875,641

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	78	424,183	323,873	522,545	322,950	\$404,721.55	607,898
West coast of Canada to Europe:							
Belgian.....	1	7,044	4,567	7,217	4,398	5,708.75	10,450
British.....	12	64,763	47,089	76,100	47,511	58,861.25	95,145
Danish.....	2	13,393	9,908	16,755	10,414	12,385.00	16,748
Dutch.....	2	13,611	10,636	17,050	10,610	13,295.00	17,308
French.....	2	12,252	7,428	13,629	7,816	9,285.00	12,710
German.....	3	17,346	14,245	24,047	14,686	17,806.25	26,447
Italian.....	1	5,981	4,365	7,098	4,498	5,456.25	8,584
Japanese.....	5	23,761	22,231	28,891	20,059	27,788.75	38,351
Norwegian.....	3	16,122	10,870	18,014	11,098	13,587.50	23,660
Swedish.....	2	9,328	5,459	9,545	6,872	6,823.75	12,835
United States.....	4	22,145	17,192	26,072	17,216	21,256.95	33,788
Total.....	37	209,746	153,990	244,418	155,178	192,254.45	296,026
West coast of South America to east coast of United States:							
British.....	8	36,981	30,990	53,768	32,571	38,737.50	58,556
Chilean.....	2	9,377	6,899	14,620	7,952	8,623.75	6,760
Danish.....	1	4,558	2,734	4,553	2,785	3,417.50	7,950
Peruvian.....	1	3,544	3,510	4,763	3,089	4,252.80	4,057
Swedish.....	2	8,917	7,486	30,676	8,762	9,357.50	43,796
United States.....	13	58,621	45,869	83,653	45,817	57,070.85	135,614
Total.....	27	121,998	97,488	192,033	100,976	121,459.90	256,733
West coast of South America to Europe:							
British.....	9	43,797	33,659	54,812	34,010	42,073.75	57,989
Danzig.....	1	6,127	5,268	8,939	5,007	6,585.00	11,330
Dutch.....	2	9,640	5,431	9,243	5,650	6,788.75	13,345
French.....	2	10,417	7,506	12,262	7,512	9,382.50	18,142
German.....	5	26,483	20,104	32,457	19,804	25,130.00	39,847
Italian.....	2	18,702	10,399	23,387	13,529	12,998.75	6,194
Norwegian.....	3	15,000	11,124	18,598	11,162	13,905.00	21,339
Yugoslav.....	2	10,210	7,406	12,038	7,390	9,257.50	18,470
Total.....	26	140,376	100,897	171,736	104,064	126,121.25	186,656

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of United States to Europe:							
British	8	38,810	30,094	48,902	30,831	\$37,617.50	65,046
Danzig	1	6,338	5,236	8,956	5,041	6,545.00	10,907
French	2	10,140	8,769	13,806	8,084	10,961.25	17,672
German	2	7,402	5,630	9,403	5,443	7,037.50	12,061
Japanese	3	12,917	11,943	16,876	12,172	14,595.00	22,711
Norwegian	2	11,115	9,350	15,407	9,184	11,687.50	20,792
United States	1	5,239	3,842	6,157	3,801	4,802.50	7,642
Total	19	91,961	74,864	119,507	74,556	93,246.25	156,831
West coast of South America to Cristobal:							
Colombian	4	574	554	880	550	682.10	750
Dutch	2	1,484	588	1,560	646	735.00	834
German	4	3,148	2,361	4,217	2,894	2,951.25	3,059
Total	10	5,206	3,503	6,657	3,990	4,368.35	4,643
West coast of United States to West Indies:							
British	2	(¹)	(¹)	(¹)	(¹)	5,340.00	
Norwegian	2	8,601	7,259	11,582	7,008	6,192.72	
United States	1	6,050	5,140	8,207	5,092	4,356.00	
Total	5	14,651	12,399	19,789	12,100	15,888.72	
Philippine Islands to east coast of United States:							
Danish	1	5,500	3,081	5,038	3,155	3,851.25	7,035
Japanese	2	10,313	8,416	13,523	8,271	10,520.00	6,014
United States	2	9,085	7,675	11,320	8,595	9,476.85	10,534
Total	5	24,898	19,172	29,881	20,021	23,848.10	23,583
Far East to Europe:							
British	2	8,855	7,383	11,914	7,396	9,228.75	13,859
Japanese	3	14,190	13,794	18,531	13,402	16,826.05	17,361
Total	5	23,045	21,177	30,445	20,798	26,054.80	31,220
Australasia to Europe:							
British	5	43,296	30,449	50,908	31,482	38,061.25	29,461
West coast of United States to Cristobal:							
United States	4	9,432	7,298	12,175	7,182	9,122.50	2,368
West coast of Central America to Cristobal:							
British	4	3,734	3,206	6,001	3,369	4,007.50	876
Canadian intercoastal:							
British	3	12,301	9,431	15,711	9,788	11,788.75	17,129
West coast of Canada to east coast United States:							
Norwegian	1	5,058	2,788	4,663	2,793	3,485.00	7,019
United States	2	9,704	6,873	10,773	6,873	8,591.25	13,226
Total	3	14,762	9,661	15,436	9,666	12,076.25	20,245
Hawaii to east coast of United States:							
United States	2	6,754	5,348	8,635	5,279	6,685.00	11,804
West coast of Canada to east coast of South America:							
Norwegian	1	5,246	2,949	4,883	2,999	3,686.25	3,692
United States	1	5,030	3,514	5,515	3,511	4,392.50	6,452
Total	2	10,276	6,463	10,398	6,510	8,078.75	10,144
West coast of South America to east coast of Canada:							
British	2	14,420	12,366	22,719	11,469	15,457.50	31,293
West coast of South America to West Indies:							
British	2	3,892	3,363	5,582	3,370	5,477.24	
Far East to West Indies:							
Japanese	1	4,959	3,939	5,784	3,608	4,923.75	7,767
Norwegian	1	4,681	2,496	4,400	2,527	3,120.00	7,300
Total	2	9,640	6,435	10,184	6,135	8,043.75	15,067

¹ Naval vessels having a total of 10,680 displacement tons.

² Includes naval vessel of 5,350 displacement tons.

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Australasia to east coast of Canada:							
British.....	2	8,591	6,557	10,866	6,673	\$8,196.25	4,851
West coast of United States to east coast of Central America:							
British.....	1	5,423	4,733	7,270	4,513	3,904.56	.....
West coast of United States to east coast of South America:							
British.....	1	4,492	3,574	5,595	3,528	4,467.50	2,608
West coast of Central America to east coast United States:							
British.....	1	1,341	1,250	1,935	1,183	1,562.50	2,450
West coast of Central America to Europe:							
German.....	1	2,356	1,468	2,446	1,434	1,835.00	3,222
South American interoceanic:							
British.....	1	806	424	944	482	530.00	.....
West coast of South America to Egypt:							
Belgian.....	1	6,211	4,522	7,130	4,013	5,652.50	9,700
Hawaii to Europe:							
Belgian.....	1	3,988	3,155	5,172	3,078	3,943.75	6,700
Far East to east coast of United States:							
Norwegian.....	1	6,829	3,973	6,687	4,085	4,966.25	5,737
Australasia to east coast of United States:							
Norwegian.....	1	4,859	2,619	4,444	2,669	3,273.75	7,312
Grand total, October, 1930....	252	1,229,467	933,658	1,547,249	940,141	1,165,093.92	1,744,557
Grand total, October, 1929....	287	1,353,743	1,029,194	1,690,057	1,032,129	1,290,170.15	1,997,296
Grand total, October, 1928....	251	1,133,692	867,994	1,436,367	874,503	1,084,360.04	1,706,836

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 13, 1930.

No. 798.

PANAMA, WEST COAST, LIGHTS ESTABLISHED.

1. *Morro Puercos Light*. Because of errors in projection on H. O. Charts 1018 and 1019, the new Morro Puercos Light (See Notice to Mariners No. 791, November 4, 1930) plots off the land; it correctly plots on H. O. Chart No. 5447 however. When using charts 1018 and 1019, use the following position for the light: Latitude 7° 13' 55" N., longitude 80° 26' 15" W.

Ships are cautioned to keep off the light from 4 to 5 miles to avoid foul ground. Tower is painted white, day marks on two sides; correction to N. M. No. 791, which should be noted accordingly.

2. *Jicarita Island Light*. A new light is now under construction on the southwest portion of the island and will be in operation about November 21st. *Characteristics*: Flashing white; two distinct flashes of 1.5 seconds duration every 15 seconds. Visibility 20 miles. *Description*: Pyramidal lattice work steel tower, 50 feet high, painted white, day marks on two sides. Height of focal plane about 350 feet above mean high water.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 14, 1930.

No. 799.

Panama, west coast, South Frailes Island Light, characteristics changed. South Frailes Island Light was changed from flashing white to flashing red on November 14, 1930.

Position: Latitude 7° 19' 45" N., longitude 80° 7' 55" W. *Characteristics*: Flashing red; period 4 seconds; light 0.5 second, eclipse 3.5 seconds; 15 flashes per minute.

Description: The lighthouse is located on the small island, about 100 feet N. W. of the main island, and consists of a 375 m. m. acetylene gas lantern mounted on a 13-foot steel tower, tower set on a 7½-foot concrete pedestal. Tower and pedestal painted white. *Height*: 59 feet above mean high water. *Visibility*: 15 nautical miles.

H. BURGESS,
Governor.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective November 17, 1930.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb.	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.12
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference. It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.
PUBLISHED WEEKLY.



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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., November 26, 1930. No. 17.

CANAL WORK IN OCTOBER, 1930.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of October, 1930.

BALBOA HEIGHTS, C. Z., November 18, 1930.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of October, 1930:

NUMBER OF TRANSITS.

During the month 517 commercial vessels and 7 small nonseagoing launches under 20 tons transited the Canal. In addition to these there were 39 vessels belonging to the United States Government, 2 transits of a Panamanian Government vessel, and one transit of a vessel solely for repairs, on which no tolls were collected, making a total of 566 transits for the month, or a daily average of 18.26.

Tolls on the commercial vessels amounted to \$2,288,982.08, and on the launches to \$28.50, a total of \$2,289,010.58, or a daily average on all traffic of \$73,839.05.

Commercial traffic for the past month was the second highest in the current calendar year both in number of transits and the amount of tolls collected, having been exceeded only by the traffic passing through in January (531 transits and \$2,360,211.24 in tolls). The increase in tonnage was due to the additional tonnage placed in service to take care of the seasonal increase in shipments, particularly food products. As compared with the traffic passing through in October, 1929, that for October, 1930, shows approximately an 8 per cent decrease. In comparison with the first ten months in 1929, traffic for the corresponding period this year has fallen off to the extent of 472 transits and \$1,183,705.27 in tolls, decreases of 8.8 per cent and 5.1 per cent, respectively.

The total numbers of craft of all kinds transiting the Canal during the month of October in the two preceding years, and in 1930, are shown in the following tabulation:

	October, 1928.	October, 1929.	October, 1930.
Commercial vessels.....	557	564	517
Launches (under 20 tons).....	10	8	7
Noncommercial vessels:			
United States Government.....	30	42	39
Panamanian Government.....	1	1	2
For repairs.....	4	1	1
Total.....	602	616	566

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, launches, etc., was passed through the locks as follows:

	North- bound.	South- bound.	Total.
Gatun.....	3	3	6
Pedro Miguel.....	16	14	30
Miraflores.....	11	12	23
Total.....	30	29	59

COMMERCIAL TRAFFIC.*

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the calendar year to the end of October in 1929, and 1930:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929.	1930.	1929.	1930.	1929.	1930.	1929.	1930.
January...	603	531	2,771,280	2,601,628	2,858,835	2,611,632	\$2,502,815.12	\$2,360,211.24
February...	522	491	2,428,530	2,369,255	2,550,498	2,377,900	2,211,961.20	2,131,386.12
March...	536	515	2,567,961	2,505,859	2,743,768	2,558,238	2,343,865.55	2,260,002.36
April...	540	489	2,488,176	2,479,066	2,719,668	2,456,782	2,281,087.27	2,232,763.00
May...	524	479	2,496,905	2,418,633	2,536,839	2,261,616	2,296,546.57	2,162,898.60
June...	503	478	2,352,431	2,358,237	2,434,002	2,147,181	2,127,805.97	2,100,994.53
July...	527	488	2,468,280	2,438,895	2,598,162	2,402,047	2,259,582.37	2,180,511.82
August...	541	465	2,558,739	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
September...	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.58
October...	564	517	2,747,949	2,584,160	2,845,643	2,394,410	2,485,897.71	2,288,982.08
Total...	5,383	4,911	25,305,512	24,415,760	26,390,928	23,417,857	23,038,789.02	21,855,083.75

* Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these Governments, and vessels transiting solely for repairs, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for October in the years 1928, 1929, and 1930, and comparison with the monthly averages for the fiscal year 1930:

	October, 1928.	October, 1929.	October, 1930.	Average per month for fiscal year 1930.
Number of vessels.....	557	564	517	515
Panama Canal net tonnage.....	2,515,380	2,747,949	2,584,160	2,498,385
United States net tonnage.....	1,918,911	2,078,700	1,932,164	1,890,255
Registered gross tonnage.....	3,155,239	3,418,334	3,187,500	3,119,221
Registered net tonnage.....	1,922,785	2,083,068	1,935,296	1,899,802
Tolls.....	\$2,274,945.30	\$2,485,897.71	\$2,288,982.08	\$2,256,407.50
Tons of cargo carried.....	2,582,477	2,845,643	2,394,410	2,502,519

The average daily number of transits, tonnage, tolls, and cargo are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for fiscal year, 1930.
	October, 1928.	October, 1929.	October, 1930.	
Number of transits.....	17.97	18.19	16.68	16.95
Panama Canal net tonnage.....	81,141	88,644	83,360	82,139
Tolls.....	\$73,385.33	\$80,190.25	\$73,838.13	\$74,183.43
Tons of cargo carried.....	83,305	91,795	77,239	82,275

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of October in 1928, 1929, and 1930, are shown in the following tabulation:

	Average per vessel.		
	October, 1928.	October, 1929.	October, 1930.
Panama Canal net tonnage.....	4,516	4,872	4,998
United States net tonnage.....	3,445	3,686	3,737
Registered gross tonnage.....	5,665	6,061	6,165
Registered net tonnage.....	3,452	3,693	3,743
Tolls.....	\$4,084.28	\$4,407.62	\$4,427.43
Tons of cargo (including vessels in ballast).....	4,636	5,045	4,631
Tons of cargo (laden vessels only).....	5,688	5,941	5,742

NATIONALITY OF VESSELS.

Nineteen nationalities were represented in the commercial traffic passing through the Canal in October, 1930. Vessels of United States registry, with 215, led in the number of transits, while those flying the British flag, with 144, were second. Vessels

of these two nationalities made up 69 per cent of the total transits for the month. Norway and Germany were next with 34 and 28, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo carried through the Canal during the month of October, 1930, was 2,394,410 tons. Cargo from the Atlantic to the Pacific aggregated 649,853 tons, as compared with 595,589 tons in September, 1930, and 848,347 tons in October, 1929. From the Pacific to the Atlantic there were 1,744,557 tons, as compared with 1,463,993 tons in September, 1930, and 1,997,296 tons in October, 1929.

From the Atlantic to the Pacific various manufactured goods, totaling 169,693 tons, constituted the heaviest item of cargo, followed by mineral oils with 54,924 tons, cotton with 39,846 tons, and sulphur with 30,573 tons. There was a decrease of 198,494 tons of cargo, or 23.4 per cent, in this direction as compared with October, 1929, due to lessened shipments of many of the important commodities.

From the Pacific to the Atlantic mineral oil shipments totaling 455,268 tons constituted the heaviest item, followed by lumber with 238,501 tons, ores (principally iron) with 174,267 tons, wheat with 169,165 tons, miscellaneous canned goods with 145,341 tons, and nitrates with 138,681 tons. There was a decrease of 252,739 tons, or 12.7 per cent, in this direction as compared with October, 1929. Mineral oil shipments declined 150,097 tons, or 24.8 per cent; nitrates, 135,902 tons, or 49.5 per cent; and lumber, 83,669 tons, or 26 per cent. Wheat and miscellaneous canned goods increased, respectively 45,060 tons, or 36.3 per cent, and 42,443 tons, or 41.2 per cent, in comparison with the corresponding month in the preceding year.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton, nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.921 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.718 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of October, 1930, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Diferenoe.	
			Increase.	Decrease.
Belgian.....	\$15,305.00	\$17,243.00	\$1,938.00	
British.....	* 621,824.12	* 642,357.40	20,533.28	
Chilean.....	15,606.25	17,577.00	1,970.75	
Colombian.....	1,724.20	1,455.00		\$269.20
Danish.....	41,212.07	44,628.00	3,415.93	
Danzig.....	17,673.20	16,251.00		1,422.20
Dutch.....	42,493.75	53,333.00	10,839.25	
French.....	58,614.34	65,433.20	6,818.86	
German.....	102,058.60	112,103.00	10,044.40	
Greek.....	2,468.88	2,057.40		411.48
Italian.....	38,535.87	44,519.80	5,983.93	
Japanese.....	118,493.70	108,686.00		9,807.70
Norwegian.....	134,565.27	151,313.40	16,748.13	
Panamanian.....	14.40	12.00		2.40
Peruvian.....	4,252.80	3,544.00		708.80
Spanish.....	6,800.36	6,196.80		683.56
Swedish.....	23,030.87	25,861.60	2,830.73	
United States.....	1,034,970.90	1,074,091.40	39,120.50	
Yugoslav.....	9,257.50	10,210.00	952.50	
Total.....	2,288,982.08	2,396,873.00	121,196.26	13,305.34
Net increase for all traffic.....			107,890.92	

* Includes \$8,015 collected for naval vessels at \$0.50 per displacement ton.

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States interoceanic trade.....	\$23,282.61
United States foreign trade.....	15,154.14
United States—Canal Zone trade.....	683.75
Total.....	39,120.50

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in October, 1930, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included.

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....		1.56	1.56
British.....	.72	1.35	1.06
Chilean.....	.25	.72	.50
Colombian.....	1.33	1.31	1.35
Danish.....	.71	1.35	1.13
Danzig.....		1.78	1.78
Dutch.....	.38	1.27	.80
French.....	.49	1.48	1.01
German.....	.58	1.39	1.03
Italian.....	.26	.60	.48
Japanese.....	1.08	1.39	1.27
Norwegian.....	1.01	1.41	1.23
Peruvian.....		1.14	1.14
Spanish.....	1.59		1.59
Swedish.....	.84	3.10	2.62
United States.....	.74	1.51	1.18
Yugoslav.....		1.81	1.81
Averages, October, 1930.....	.73	1.45	1.14
Averages, October, 1929.....	.87	1.48	1.23
Averages, October, 1928.....	.92	1.51	1.24

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of October is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	3	15,539	\$16,878.10	45	259,084	\$264,968.40
Ballast.....	41	236,554	170,385.03	4	19,859	14,298.48
General cargo ships:						
Laden.....	171	875,671	774,188.85	198	945,611	874,325.00
Ballast.....	48	226,686	162,258.28	2	4,913	3,487.04
Noncargo-carrying ships:						
Naval.....				3		8,015.00
Yachts.....	2	243	177.90			
Total.....	265	1,354,693	1,123,888.16	252	1,229,467	1,165,093.92
Method of propulsion:						
Steam.....	187	960,182	811,682.82	193	899,796	\$64,638.62
Motor.....	76	392,558	309,861.74	59	329,671	300,455.30
Motor schooner.....	1	307	368.40			
Sail.....	1	1,646	1,975.20			
Total.....	265	1,354,693	1,123,888.16	252	1,229,467	1,165,093.92

Of the 380 steam-driven vessels, 265 were oil burning, 105 coal burning, and 10 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of October, 1930. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Ammunition ships.....				1	3 4,405	\$5,506.25
Battleships.....				1	27,000	13,300.00
Cargo ships.....				2	6,849	8,561.25
Cruisers.....	1	8,150	\$4,075.00	1	3,200	1,600.00
Launches.....	3	15	10.80			
Minesweepers.....	2	1,900	950.00	2	1,900	950.00
Submarines.....	8	6,986	3,493.00	5	4,358	2,179.00
Survey ships.....				1	2,600	1,300.00
Tankers.....	1	5,198	6,237.60	1	5,181	3,885.75
Transports.....				1	3,908	4,885.00
U. S. Army vessels:						
Transports.....	3	11,724	14,655.00	2	6,943	8,678.75
Tugs.....	2	92	69.00	2	92	69.00
Total, U. S. Government.....	20		29,490.40	19		51,115.00
Panamanian Government vessels:						
Transports.....	1	101	72.72	1	101	72.72
Vessels for repairs:						
Tankers.....				1	1,645	1,233.75
Grand total.....	21		29,563.12	21		52,421.47

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of October, 1930, carried cargo as follows: Atlantic to Pacific, 1,374 tons; Pacific to Atlantic, 14,440 tons; total 15,814 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of October, 1930. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	4	10	\$7.50
Pacific to Atlantic.....	3	25	21.00
Total.....	7	35	28.50

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of October, 1930, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	82,944	73,274	156,218
Local cargo shipped..... tons..	7,078	722	7,800
Transit cargo arriving..... tons..	2,415,813	2,404,730	4,823,526
Transit cargo clearing..... tons..	2,399,134	2,408,392	4,807,526
Cargo received for transshipment..... tons..	23,691	2,474	26,165
Cargo transhipped..... tons..	24,471	1,935	24,406
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	120	41	161
Number of releases issued.....	732	254	986
Tons received.....	1,450	441	1,891
Tons withdrawn.....	1,686	357	2,043
Packages received.....	5,840	1,673	7,513
Packages withdrawn.....	5,556	3,860	9,416
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	34	1	35
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons..	8,762	556	9,318
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	69	5	74
U. S. Army, including vessels..... tons..	50	11	61
Individuals and companies..... tons..	145		145
Panama Railroad Company..... tons..	6		6
Transferred to Navy..... tons..	572		572
Total sales and issues..... tons..	9,604	572	10,176

	Cristobal.	Balboa.	Total.
Coal on hand, October 1, 1930..... tons..	77,685		77,685
Coal on hand, November 1, 1930..... tons..	68,081		68,081
Coal received from Navy..... tons..		572	572
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls...	7,529.37	18,265.40	25,794.77
Panama Railroad Company..... bbls...	865.33	460.60	1,325.93
U. S. Army and Navy..... bbls...	525.10	171.21	696.31
Individuals and companies..... bbls...		169.96	169.96
Total sales and issues..... bbls...	8,919.80	19,067.17	27,986.96
Fuel oil on hand November 1, 1930..... bbls...	48,394.74	60,015.68	108,410.42
Diesel oil issued and sold during October..... bbls...	209.93	1,298.50	1,508.43
Diesel oil on hand November 1, 1930..... bbls...	* 1,082.50	10,720.39	11,802.89
Miscellaneous transfers..... bbls...	20,419.73	892.01	21,311.74
Gasoline and kerosene pumped for The Panama Canal..... bbls...	2,386.70	4,244.79	6,631.49
Gasoline pumped for individuals and companies..... bbls...	656.24	6,111.88	6,768.12
Oil pumped for individuals and companies:			
Receipts..... bbls...	282,201.94	396,450.16	678,652.10
Issues..... bbls...	265,980.13	225,601.28	491,581.41
Oil pumped for U. S. Navy..... bbls...	6,851.00	97,131.00	103,982.00
Total fuel oil, gasoline and kerosene handled..... bbls...	587,625.47	750,796.79	1,338,422.26
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	24	4	28
Measured for Panama Canal net tonnage.....	5	3	8
Remeasured for Panama Canal net tonnage.....	19	1	20
Panama Canal net tonnage corrected.....	3	5	8
U. S. equivalent tonnage corrected.....	8	13	21
Services of harbor equipment:			
Tugs, total operating hours.....	391½	299½	691½
Launches, total operating hours.....	1,384½	1,491	2,875½
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$12,836.25	\$8,802.50	\$21,638.75
Pilotage.....	18,744.00	8,804.00	27,548.00
Seamen.....	12,424.00	11,744.00	24,168.00
Launch service.....	2,109.00	2,882.50	4,991.50
Wharfage.....	15,611.25	7,006.21	22,617.46
Ships measured.....	15.00	10.00	25.00
Miscellaneous.....	379.86	148.50	528.36
Ships repaired at Panama Canal shops:			
Commercial.....	37	11	48
U. S. Army and Navy.....	11	7	18
Panama Canal equipment.....	7	11	18
Total.....	65	29	94
Vessels dry docked:			
Commercial.....	7	3	10
U. S. Army and Navy.....		4	4
Panama Canal equipment.....	2	2	4
Total.....	9	9	18
Clearances issued.....	315	273	588
Bills of health issued.....	311	277	588

* Includes 209.93 barrels borrowed from Union Oil Company.

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal..	584	3,670,222	2,247,881	548	3,386,339	2,088,622
Vessels entering port, but not transiting Canal.	65	340,037	202,097	8	42,894	28,031
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	128	867,760	525,457	111	695,221	418,152
<i>Ships clearing.</i>						
All vessels, including those transiting Canal..	576	3,635,113	2,223,650	546	3,393,817	2,091,408
Vessels clearing port, but not transiting Canal.	63	334,247	195,846	7	37,860	23,905
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	124	851,397	515,283	111	702,328	422,473

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	1,477	1,002	2,479	144	227	371
From Pacific ports.....	153	117	270	206	193	399
Total disembarking.....	1,630	1,119	2,749	350	420	770
Embarking:						
For Atlantic ports.....	932	1,203	2,135	53	37	90
For Pacific ports.....	117	218	335	307	242	549
Total embarking.....	1,049	1,421	2,470	360	279	639
Remaining on board:						
From Atlantic to Pacific ports.....	2,407	4,302	6,709	1,957	3,656	5,613
From Pacific to Atlantic ports.....	996	2,127	3,123	1,034	2,072	3,106
From Atlantic to Atlantic ports.....	385	144	529	15	58	73
From Pacific to Pacific ports.....						
Total remain on board.....	3,788	6,573	10,361	3,006	5,786	8,792
Total arriving.....	5,418	7,692	13,110	3,356	6,206	9,562
Total departing.....	4,837	7,994	12,831	3,366	6,065	9,431

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	265	68	25.6
Pacific to Atlantic.....	252	67	26.6
Total.....	517	135	26.1

In addition to the aforesaid, 53 passenger-carrying vessels called at the port of Cristobal and 5 at Balboa without transiting the Canal, making a total of 153 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of October, 1930, 39 commercial airplanes entered and 44 cleared at the port of Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of October, 1930, together with the total sales in the corresponding month in 1929 and 1928:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels.....	\$2,467.63	\$12,185.18	\$24,342.29	\$92.22	\$7,926.31	\$47,013.63
Government vessels.....	109.75	1,389.42	9,027.01	100.66	1,673.83	12,300.67
P. R. R. vessels.....	2.40	294.88	532.40	897.94	176.60	1,904.22
Total sales, October, 1930...	2,579.78	13,869.48	33,901.70	1,090.82	9,776.74	61,218.52
Total sales, October, 1929...	2,920.61	15,968.04	40,869.40	1,099.89	8,497.38	69,355.32
Total sales, October, 1928...	3,225.87	12,899.79	42,843.28	1,057.09	6,798.18	66,824.21
Sales at Balboa to:						
Commercial vessels.....	1,193.81	1,616.81	14,758.41	592.18	10,606.51	28,767.72
Government vessels.....	305.55	1,238.86	12,280.64	115.56	2,599.09	16,539.70
P. R. R. vessels.....				33.94		33.94
Total sales, October, 1930...	1,499.36	2,855.67	27,039.05	741.68	13,205.60	45,341.36
Total sales, October, 1929...	1,566.71	14,883.54	42,100.17	1,404.99	8,043.58	67,998.99
Total sales, October, 1928...	606.95	19,660.73	40,075.87	935.58	7,260.91	68,540.04

The aggregate sales to Government vessels during the month were \$28,840.37; to Panama Railroad vessels, \$1,938.16; and to other commercial vessels, \$75,781.35, making the total sales to all vessels, \$106,559.88.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of October, 1930, as compared with the corresponding month in 1929 and 1928:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. †			Oct., 1928.	Oct., 1929.	Oct., 1930.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	248	249	497	14	10	24	539	563	521
Pedro Miguel.....	248	255	503	17	14	31	576	576	534
Miraflores.....	247	255	502	17	12	29	569	574	531
Number of vessels put through locks.									
Gatun.....	255	265	520	35	28	63	612	658	583
Pedro Miguel.....	252	264	516	41	35	76	673	647	592
Miraflores.....	252	264	516	36	33	69	672	645	585

† Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	46	38	38
Panama Canal equipment.....	6	30	23
Launches (under 20 tons).....	8	5	5
Vessels for repairs.....	1	1	1
Panamanian Government vessels.....	2	2	2

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in October, 1930, as compared with the preceding month and the corresponding month in 1929:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	2,150,900,000	1,791,920,000	1,574,580,000
Maintenance.....	51,880,000	4,060,000	4,060,000
Leakage.....	40,000,000	14,000,000	20,000,000
Total, October, 1930.....	2,242,780,000	1,805,920,000	1,598,640,000
Total, September, 1930.....	1,913,000,000	1,489,810,000	1,415,470,000
Total, October, 1929.....	2,317,260,000	1,845,530,000	1,773,720,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of October, 1930, are shown in comparative form in the following tabulation:

	October.		October—Years of record.		
	1929.	1930.	Maximum.	Minimum.	Mean.
Discharge of Chagres River at Alhajuela.....	<i>C. f. s.</i> 3,396	<i>C. f. s.</i> 3,355	<i>C. f. s.</i> 8,126	<i>C. f. s.</i> 2,031	<i>C. f. s.</i> 3,565
Maximum momentary discharge for the month.....	22,860	16,766	108,300	.....	.....
Gatun Lake watershed, total yield.....	10,464	8,336	27,269	8,336	12,470
Gatun Lake watershed, net yield.....	9,832	7,719	26,815	7,719	11,906
Draft on Gatun Lake for lockages and power.....	3,058	3,096	3,058	2,191	2,382

¹ October 22, 1923.

² 1914 excluded.

³ Hydroelectric plant carried full load.

The monthly mean discharge of the Chagres River at Alhajuela for October, 1930, was 3,355 c. f. s., which is 6 per cent below the 29-year average of 3,565 c. f. s. The maximum monthly mean discharge on record for October is 8,126 c. f. s. in 1923, and the minimum is 2,031 c. f. s. in 1904. Rises of five feet or more at Alhajuela occurred on the 9th, 22d, and 23d. The maximum momentary discharge for the

month was 16,766 c. f. s. at elevation 100.42 feet on the 22d, and the minimum was 1,836 c. f. s. at elevation 92.92 feet on the 9th. The maximum momentary discharge on record for October is 108,300 c. f. s. at elevation 117.42 feet on October 22, 1923, and the minimum is 1,290 c. f. s. at elevation 92.60 feet on October 17, 1911.

Gatun Lake varied in elevation during October from a minimum of 85.93 feet on the 6th, to a maximum of 86.55 feet on the 31st, and averaged 86.21 feet. The elevation on September 30th was 86.02 feet, and at midnight on October 31st, 86.50 feet, showing a net rise during the month of forty-eight hundredths of a foot. The total yield of Gatun Lake watershed was 8,336 c. f. s., which is 33 per cent below the 17-year average of 12,470 c. f. s., and the minimum for the 17-year period. The maximum total yield for October is 27,260 c. f. s. in 1923.

Miraflores Lake varied between elevations 52.86 feet on the 24th and 54.48 feet on the 18th. The mean elevation for the month was 53.80 feet and at midnight on the 31st it was 53.75 feet.

SEISMOLOGY.

No seismic disturbances were recorded during the month.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,249,800 kilowatt hours, and the computed water consumption was 4,028,497,842 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 2,700 kilowatt hours, and the fuel oil consumption was 15.68 barrels. This station was operated only for peak-load service during the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 31 vessels during the month. There were 494 work orders issued during the month, as compared with 422 issued during the previous month.

MECHANICAL DIVISION.

During the month of October, 1930, miscellaneous repairs were made on 55 vessels at Cristobal and 29 at Balboa. Nine vessels were dry-docked at Cristobal and 9 at Balboa. Work was completed on the annual overhaul of the tug *Engineer* of the Marine Division. Work was completed during the month on the U. S. S. *Mallard* and the submarine *S-20* which were at the Balboa shops for interim docking. Work on the U. S. S. *Sciota*, which entered drydock last month for overhaul, was carried forward during the month.

MUNICIPAL ENGINEERING DIVISION.

On the Thatcher Highway under construction from the Canal to the Zone boundary near Arraijan, 4,500 lineal feet of right-of-way were cleared and 1,327 cubic yards excavated. Due to wet weather, work on this road was reduced to a minimum on October 6.

Miscellaneous municipal work around the Naval Air Station, Coco Solo, consisting of excavating, grading, paving, curbing, etc., was continued during October.

Work on several improvement projects in the cities of Colon and Panama, and in the Canal Zone, was carried on.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 733,720,250 gallons.

DREDGING DIVISION.

The general movement along the waterfront of West Culebra slide continued throughout the month with an average movement of nine-tenths of a foot toward the Canal between stations 1770-00 and 1795-00 W., and six-tenths of a foot southward between stations 1771-00 and 1777-00 W. The reference points on this slide also showed a small movement. There was a slight surface movement on West Lirio slide throughout the month, which caused a slight shoaling along the west prism line. South Cucaracha slide and Cucaracha Signal Station slide each showed slight surface movements during the month, but no appreciable amount of material entered the Canal prism. There were a few new bank breaks during the month throughout the Cut. There was no interference with shipping on account of slides during the month.

The total excavation during October, 1930, was 821,320 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
	<i>Cubic yds.</i>	<i>Cubic yds.</i>	<i>Cubic yds.</i>
Work excavation:			
Atlantic entrance, maintenance	190,000	.....	190,000
Gaillard Cut, Project No. 3	24,150	96,500	120,650
Pacific entrance, Project No. 1	7,000	15,950	22,950
Pacific entrance, maintenance	12,250	.....	12,250
Balboa inner harbor, Project No. 1	18,000	42,000	60,000
Balboa inner harbor, maintenance	412,400	.....	412,400
Plant excavation:			
Colon fill	1,000	.....	1,000
Dredging sand at Chame	2,070	.....	2,070
Total	666,870	154,450	821,320

The ferry crossing at the north end of Pedro Miguel locks operated 31 days during the month. One thousand three hundred sixty-eight single trips were made, and 95 Panama Canal, 33 U. S. Army, and 4,234 other vehicles, a total of 4,362 were ferried across the Canal.

MADDEN DAM PROJECT.

The geological investigations were carried on intensively. Fifty-two linear feet of test pits for rock investigations and four hundred eighty linear feet of drilling with diamond and shot drills were completed during the month.

Survey for transmission line from Summit to Madden Dam was continued from the Canal Zone 5-mile boundary line to Summit. A section on the Summit end and another section near the Pedro Miguel River crossing were relocated. About 7 miles of profile were completed. Compression tests were made at Miraflores laboratory of stone from shot drill cores and 2-inch diamond drill cores. Permeability tests were made from 2-inch cores. A report was received of clay content of damsite rock. Observations of water table, silt analysis, and stream gauging were continued. Two flood warnings were received on days on which the river rose more than 10 feet, the arbitrary limit set for such warnings. Studies were continued for the main dam, power plant, spillway, transmission line, substation, and switching station at Summit.

SCHOOLS.

The Canal Zone white schools opened on October 1st. The colored schools operate on a 12-month basis. Compared with October, 1929, the white school attendance was increased by 87 pupils and that of the colored schools by 246 pupils, with 9 additional white teachers and 8 additional colored teachers to take care of the increased enrollment.

The following tabulation shows the enrollment and number of teachers for October, 1929 and 1930:

	October, 1929.	October, 1930.
White schools:		
Gross enrollment	2,610	2,697
Teachers (including superintendent and assistants, principals and supervisors)	100	109
Colored schools:		
Gross enrollment	3,789	4,035
Teachers (including principals)	85	93

Included in the increase in the white teaching personnel are one assistant to the superintendent as Director of Research, and 3 supervisors.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on October 31, 1930, was 23,456, composed of 8,018 Americans, 2,869 of whom were men, 2,417 women, and 2,732 children; 181 Europeans, 81 of whom were men, 30 women, and 70 children; and 15,257 West Indians, 4,208 of whom were men, 2,787 women, and 8,262 children. The total number of persons in quarters on October 31, 1929, was 22,082.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of October 15, 1930, with a comparison of the working force for the preceding month and for October, 1929:

	Total employees.		As of October 15, 1930.		
	October, 1929.	September, 1930.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	125	119	54	64	118
Electrical.....	320	363	164	204	368
Municipal Engineering.....	856	1,220	99	771	870
Lock operation.....	954	956	243	716	959
Dredging.....	1,246	1,136	199	995	1,194
Madden Project.....	706	253	21	185	206
Mechanical.....	1,408	1,395	503	926	1,429
Marine.....	818	782	199	605	804
Fortifications.....	325	249	21	338	359
Total.....	6,758	6,473	1,503	4,804	6,307
Supply Department:					
Quartermaster.....	2,477	1,906	209	1,561	1,770
Commissary.....	1,511	1,593	236	1,351	1,587
Cattle Industry—Plantations.....	118	97	2	95	97
Hotel Tivoli.....	114	116	8	106	114
Hotel Washington.....	107	106	8	100	108
Transportation.....	305	325	77	248	325
Total.....	4,632	4,143	540	3,461	4,001
Accounting Department.....					
Health Department.....	207	209	203	6	209
Executive Department.....	1,183	1,129	285	812	1,097
Total.....	851	857	548	335	883
Total.....	2,241	2,195	1,036	1,153	2,189
Panama Railroad Company:					
Superintendent.....	347	304	48	257	305
Transportation.....	182	189	67	123	190
Receiving and Forwarding Agency.....	1,309	1,143	81	1,035	1,116
Coaling Stations.....	318	268	43	188	231
Total.....	2,156	1,904	239	1,603	1,842
Grand total, October, 1929.....	15,787				
Grand total, September, 1930.....		14,715			
Grand total, October, 1930.....			3,318	11,021	14,339

Additions to the gold force on the Isthmus in October were as follows: Employed in the United States, 35; reemployed in the United States, 15; employed on the Isthmus, 7; reemployed on the Isthmus, 3; total 60. Separations from the gold force totaled 36, as follows: Resigned, 17; discharged, 15; retired, 2; died, 2. At the end of the month there were on file 630 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 184 deaths occurred during the month of October, 1930, among the population of the Canal Zone, and the cities of Panama and Colon (population, 143,636), which is equivalent to an annual death rate of 15.37 per 1,000 population. The leading causes of death were: Pneumonia (broncho and lobar), 26; tuberculosis (various organs), 22; organic diseases of the heart, 22; diarrhea and enteritis, 14; and nephritis (acute and chronic), 12. There were 10 deaths from cancer, 7 from syphilis, and 1 each from leprosy and tetanus. There were 29 deaths among non-residents; these are not included in the above statistics.

There were 371 live births and 21 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 32.75. Deaths among children under 1 year of age numbered 42, giving an infant mortality rate, based on the number of live births reported, of 113.21.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during the month was 123, of whom 23 were employees (6 white and 17 colored), 16 were members of employees' families (3 white and 13 colored), 12 were Canal Zone agriculturists, 43 were other civilian nonemployees, and 29 were Army and Navy personnel. Of the 39 employees and members of employees' families, 29 were probably infected outside our sanitated areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick.

There was one death from malaria among residents, the infection being received while in an unsanitated area near the mouth of the Chagres River.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$384,908.34, of which \$367,872.52 was for the Department of Operation and Maintenance, and \$17,035.82 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material amounted to \$30,058.02.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of September, 1930, as compared with September, 1929, with the figures for the first three months of the current fiscal year as compared with the same period in the fiscal year 1930.

It is impossible to submit figures for the month of October at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	September, 1929.	September, 1930.	To end of September.	
			Last year.	This year.
Tolls.....	\$2,201,833.29	\$2,057,205.25	\$6,788,892.17	\$6,316,913.69
Other receipts.....	335,150.54	309,085.72	1,053,081.85	985,002.73
Total transit revenues.....	2,536,983.83	2,366,290.97	7,841,974.02	7,301,916.42
Total transit expenses.....	1,103,396.22	1,082,444.96	3,282,244.68	3,294,048.89
Net transit revenues.....	1,433,587.61	1,283,846.01	4,559,729.34	4,007,867.53
Three per cent capital charge....	619,953.99	625,683.92	1,860,715.31	1,877,051.76
Transit surplus.....	813,633.62	658,162.09	2,699,014.03	2,130,815.77
Business revenues.....	1,440,047.96	1,245,000.81	4,811,347.26	4,969,079.98
Business expenses.....	1,390,316.87	1,192,808.38	4,537,990.89	4,758,729.69
Net business revenues.....	49,731.09	52,192.43	273,356.37	210,350.29
Three per cent capital charge.....	61,822.42	64,898.22	198,587.51	208,102.50
Business surplus.....	*12,091.33	*12,705.79	74,768.86	2,247.79
Combined revenues.....	3,977,031.79	3,611,291.78	12,653,321.28	12,270,996.40
Combined expenses.....	2,493,713.09	2,275,253.34	7,820,235.57	8,052,778.58
Net revenues.....	1,483,318.70	1,336,038.44	4,833,085.71	4,218,217.82
Three per cent capital charge.....	681,776.41	690,582.14	2,059,302.82	2,085,154.26
Combined surplus.....	801,542.29	645,456.30	2,773,782.89	2,133,063.56

* Denotes deficit.

Respectfully,

H. BURGESS,
Governor.

United States Intercoastal Traffic by Commodities for October, 1930.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for October, 1930, and the totals for October 1929 and 1928. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation "General cargo. These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds and are for the United States intercoastal trade only:

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Agricultural implements.....	820		820
Alfalfa.....		2,241	2,241
Alfalfa meal.....		2,194	2,194
Ammonia.....	35		35
Asbestos.....	442	24	466

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Asphalt.....	110	31	141
Automobiles.....	1,671	290	1,961
Automobile accessories.....	3,307	114	3,421
Bamboo.....		2	2
Bark, cascara.....		51	51
Beans.....	36	8,095	8,131
Borax.....		721	721
Bran.....		5	5
Bricks.....	20		20
Burlap.....	172	22	194
Calcium carbide.....	72		72
Canned:			
Fish.....	706	18,304	19,010
Fruit.....	299	48,326	48,625
Meat.....	36		36
Milk.....	169	327	496
Soup.....	3,374	100	3,474
Vegetables.....	2,932	7,985	10,917
Miscellaneous.....	2,147	8,799	10,946
Carbon black.....	5		5
Celite filtereel.....		871	871
Cement.....	355	70	425
Charcoal.....	170		170
Chemicals.....	2,597	496	3,093
China and fire clay.....	95	37	132
Coal.....	1,461		1,461
Cocoa.....	192		192
Coconuts.....	100	521	621
Coffee.....	125	157	282
Coke.....	11		11
Cold storage:			
Butter.....	30		30
Cheese.....	120	125	245
Eggs.....		131	131
Fish.....	66		66
Lard.....	145	40	185
Other.....	1,050		1,050
Confectionery.....	951		951
Copra.....		120	120
Corn.....	18		18
Cotton.....	349	712	1,061
Cottonseed oilcake.....	600		600
Cottonseed meal.....		261	261
Drugs.....	1,216	223	1,439
Dyewoods.....	400		400
Earthenware.....	64	36	100
Explosives.....	39	80	119
Fertilizer.....	505		505
Flour.....	186	5,850	6,036
Fruit:			
Dried.....		19,026	19,026
Fresh.....	231	1,585	1,816
Fullers earth.....	520		520
Furniture.....	432	147	579
General.....	39,389	20,530	59,919
Glass and glassware.....	2,337	6	2,343
Glue.....	31	71	102
Hair.....		18	18
Hardwoods.....	493	9	502
Hay.....	30	1,651	1,681
Hemp.....		260	260
Honey.....		319	319
Hops.....		113	113
Horns and hoofs.....		7	7
Infusorial earth.....		21	21
Jute.....	48	17	65
Lard substitute.....	2,299		2,299
Leather.....	16		16
Linoleum.....	678	129	807
Liquors.....	47		47
Lumber.....	1,280	137,610	138,890
Manufactured goods:			
Iron and steel.....	62,470	6,087	68,557
Machinery.....	3,097	1,084	4,181
Railroad material.....			202
Tinplate.....	5,150		5,150
Textiles.....	4,393	8	4,401
Miscellaneous.....	8,176	786	8,962
Matches.....	117		117
Metals:			
Antimony.....		70	70
Copper.....	152	4,794	4,946
Iron.....	2,126		2,126
Lead.....	50		50
Scrap.....	194	137	331

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Metals—Continued:			
Tin.....		15	15
Zinc.....	24	1,624	1,648
Other.....	250	1	251
Milk, powdered.....	55	375	430
Molasses.....	71		71
Musical instruments.....	12		12
Nitrates.....	41		41
Nuts.....	58	330	388
Oats.....	133	66	199
Oils:			
Cottonseed.....	50	820	870
Gas oil, fuel oil.....		53,275	53,275
Gasoline, benzine, naphtha.....	6	208,829	208,835
Kerosene.....		9,750	9,750
Lubricating and greases.....	4,114	590	4,704
Vegetable.....	980	130	1,110
Other.....	267	902	1,169
Ores:			
Copper.....		1,220	1,220
Magnesite.....		1,117	1,117
Zinc.....	19	550	569
Other.....		126	126
Paint.....	554	144	698
Paper.....	6,200	9,402	15,602
Paper pulp.....		6,531	6,531
Paper roofing.....	48		48
Peanuts.....	575	59	634
Peas.....		331	331
Phosphates.....	2,035		2,035
Porcelain.....	122	440	562
Rags.....		85	85
Rice.....	713		713
Rope.....	42	94	136
Roan.....	325		325
Rubber:			
Manufactured.....	757	108	865
Scrap.....		10	10
Salt.....	98		98
Seeds:			
Grass.....		632	632
Hemp.....		90	90
Other.....		236	236
Shells.....	410		410
Silk.....		904	904
Skins and hides.....		3,377	3,377
Slate.....	162		162
Soap.....	2,486	198	2,684
Soda.....	354	18	372
Soda ash.....	2,351		2,351
Soda, bicarbonate.....	93		93
Soda, caustic.....	142		142
Starch.....	40		40
Sugar.....	25	9,573	9,598
Sulphur.....	13,734		13,734
Syrup.....	179	23	202
Talc.....		185	185
Tallow.....		242	242
Tea.....	27	64	91
Tobacco.....	2,016		2,016
Toys.....	353	15	368
Turpentine.....	53		53
Vegetables.....		58	58
Waste.....	38	54	92
Wax.....	50	35	85
Wheat.....		8	8
Wine.....		214	214
Wool.....		1,176	1,176
Zinc oxide.....	78		78
Total, October, 1930.....	201,296	615,872	817,168
Total, October, 1929.....	282,546	753,288	1,035,834
Total, October, 1928.....	298,721	538,857	837,578

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending November 22, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Buenaventura.....	Panama R. R. S. S. Line.....		November 4.....		276
Brielle.....	Hamburg-American Line.....	November 8.....	November 9.....	(¹)	159
Durazzo.....	Hamburg-American Line.....		November 9.....		210
Ancon.....	Panama R. R. S. S. Line.....		November 9.....		637
Manizales.....	North German Lloyd.....		November 9.....		67
Caldas.....	United Fruit Co.....		November 14.....		165
Tolosa.....	United Fruit Co.....	November 9.....	November 9.....	2	500
Costa Rica.....	Royal Netherlands S. S. Co.....	November 9.....	November 9.....	37	54
Dora K.....	R. Feuillebois.....	November 9.....	November 10.....	(¹)	16
Guadeloupe.....	French Line.....	November 9.....	November 12.....	33	900
Champerico.....	Pacific Steam Navigation Co.....	November 9.....	November 15.....	332	195
Orita.....	Pacific Steam Navigation Co.....	November 10.....	November 10.....	7	(²)
August Thyssen.....	Aluminium Line.....	November 10.....	November 10.....	365	73
Pastores.....	United Fruit Co.....	November 10.....	November 12.....	717	43
Santa Inez.....	Grace Line.....	November 11.....	November 11.....	200	222
Takeotoy Maru.....	Nippon Yusen Kaisha.....	November 11.....	November 11.....	117	(²)
Almelo.....	Royal Netherlands S. S. Co.....	November 11.....	November 12.....	195	178
Zenon.....	French Line.....	November 11.....	November 12.....	74	60
Gettengen.....	North German Lloyd.....	November 12.....	November 12.....	89	176
Metapan.....	United Fruit Co.....	November 12.....	November 13.....	490	180
Santa Barbara.....	Grace Line.....	November 12.....	November 13.....	104	52
Bridgetown.....	United Fruit Co.....	November 13.....	November 13.....	86	24
Patrick Henry.....	Tampa Intercocean Co.....	November 13.....	November 13.....	180	(²)
Indiana.....	French Line.....	November 13.....	November 13.....	23	35
Iriona.....	United Fruit Co.....	November 13.....	November 13.....	818	73
Canada.....	Johnson Line.....	November 13.....	November 13.....	(¹)	19
Ansgir.....	Roland Line.....	November 13.....	November 14.....	28	75
Baralt.....	Royal Netherlands S. S. Co.....	November 13.....	November 16.....	333	36
Ebro.....	Pacific Steam Navigation Co.....	November 14.....	November 14.....	13	(²)
President Adams.....	Dollar Line.....	November 14.....	November 14.....	1	(²)
Oakland.....	Hamburg-American Line.....	November 14.....	November 14.....	168	63
Amapala.....	Standard Fruit & S. S. Co.....	November 14.....	November 15.....	117	387
Carizo.....	Hamburg-American Line.....	November 14.....	November 16.....	842	179
San Simeon.....	Quaker Line.....	November 15.....	November 15.....	28	(²)
Teutonia.....	Hamburg-American Line.....	November 15.....	November 15.....		210
Rhodopis.....	Hamburg-American Line.....	November 15.....	November 15.....	50	81
Iriona.....	United Fruit Co.....	November 15.....	November 15.....	(¹)	447
Sparreholm.....	Aluminium Line.....	November 15.....	November 15.....	338	73
Lochkatrine.....	Pacific Steam Navigation Co.....	November 15.....	November 15.....	16	22
La Esfera.....	F. Franco.....	November 15.....	November 15.....	(²)	3
Costa Rica.....	Royal Netherlands S. S. Co.....	November 15.....	November 16.....	4	239
Adalia.....	Hamburg-American Line.....	November 15.....	November 16.....	174	92
Cauca.....	United Fruit Co.....	November 15.....	November 22.....	189	174
Aachen.....	North German Lloyd.....	November 16.....	November 16.....	16	11
Kinai Maru.....	Osaka Shosen Kaisha.....	November 16.....	November 16.....	66	105
Pastores.....	United Fruit Co.....	November 16.....	November 16.....	10	701
Alvarado.....	Pacific Steam Navigation Co.....	November 16.....	November 17.....	275	171
Lobos.....	Pacific Steam Navigation Co.....	November 16.....	November 17.....	95	19
Dramatist.....	T. & J. Harrison.....	November 16.....	November 17.....	328	(²)
Albert Vogler.....	Hamburg-American Line.....	November 16.....	November 17.....	59	40
Leme.....	Panama R. R. S. S. Line.....	November 16.....	November 17.....	130	(²)
Genevieve Lykes.....	Lykes Brothers.....	November 17.....	November 17.....	500	(²)
Pearl Marie.....	R. Feuillebois.....	November 17.....	November 17.....	(¹)	12
Waunta.....	Standard Fruit & S. S. Co.....	November 17.....		454	
Santa Elisa.....	Grace Line.....	November 17.....	November 18.....	75	336
Galicia.....	Hamburg-American Line.....	November 17.....	November 18.....	70	121
Ulua.....	United Fruit Co.....	November 17.....	November 19.....	358	8
City of San Francisco.....	Panama Mail S. S. Co.....	November 17.....	November 22.....	412	908
Laguna.....	Pacific Steam Navigation Co.....	November 18.....	November 18.....	260	(²)
Los Angeles.....	Hamburg-American Line.....	November 18.....	November 19.....	75	147
Abraham Lincoln.....	Fred Olsen Line.....	November 18.....	November 19.....	561	(²)
Colombia.....	Panama Mail S. S. Co.....	November 18.....	November 19.....	215	440
Cristobal.....	Panama R. R. S. S. Line.....	November 19.....		3,876	
Cali.....	North German Lloyd Line.....	November 19.....		964	
Sixaola.....	United Fruit Co.....	November 19.....	November 20.....	662	175
Venezuela.....	Panama Mail S. S. Co.....	November 19.....	November 20.....	317	449
Tela.....	United Fruit Co.....	November 19.....	November 20.....	1,062	70
Ariaguani.....	United Fruit Co.....	November 19.....	November 19.....	4	
Orbita.....	Pacific Steam Navigation Co.....	November 19.....	November 20.....	45	279
Salvador.....	Pacific Steam Navigation Co.....	November 20.....		154	
Oregon.....	French Line.....	November 20.....	November 20.....	34	145
Pacific Shipper.....	Furness, Withy & Co.....	November 20.....	November 21.....	(¹)	583
Aconcagua.....	Chilean Line.....	November 21.....	November 21.....	(¹)	53
Saramacca.....	United Fruit Co.....	November 21.....	November 22.....	429	(²)
Cefalu.....	Standard Fruit & S. S. Co.....	November 21.....	November 22.....	100	340
Bolivar.....	United Fruit Co.....	November 22.....		53	
San Anselmo.....	Quaker Line.....	November 22.....	November 22.....	15	(²)
Nosa King.....	N. O. & S. A. S. S. Co.....	November 22.....	November 22.....	138	(²)
Caldas.....	United Fruit Co.....	November 22.....		783	
Tela.....	United Fruit Co.....	November 22.....	November 22.....	50	217
Toba Maru.....	Nippon Yusen Kaisha.....	November 22.....	November 22.....	62	(²)
Sosua.....	United Fruit Co.....	November 22.....	November 22.....	(¹)	200
Juan S. Elcano.....	Spanish Line.....	November 22.....		250	

¹ No cargo discharged.² No cargo laded.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, November 22, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or Operator).	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Baralt.....	13	16.05	16	6.05	16	13.30	16	14.50	Dutch.....	Royal Neth. S. S. Co....	202.0	33.1	10.8	Cristobal, C. Z.....	Guayaquil, Ecuador	General.....	35	1,183	742
Adalia.....	15	17.30	16	6.15	16	13.28	17	3.54	German.....	Hamburg-American Line	337.0	48.2	17.5	Hamburg, Germany	Amapala, Honduras	General.....	1,430	4,284	3,054
Charles Nelson.....	15	20.10	16	6.40	16	14.01	16	15.20	American.....	Nelson Line.....	380.4	56.3	19.0	New York, N. Y.....	Seattle, Wash.....	General.....	3,050	5,659	4,138
Heffron.....	15	20.50	16	7.05	16	14.47	16	16.05	American.....	Isithian S. S. Lines.....	440.0	53.0	23.9	Baltimore, Md.....	Vancouver, B. C.....	(s).....	6,740	8,312	6,097
Irisbank.....	15	23.40	16	7.45	16	15.41	16	19.45	British.....	Andrew Weir & Co.....	428.7	57.4	19.6	Baltimore, Md.....	Dahly, Ohio.....	General.....	3,050	7,623	5,336
Munkhides.....	16	2.10	16	8.15	16	16.40	16	17.40	American.....	Mundson S. S. Line.....	370.0	53.0	21.6	Baltimore, Md.....	Tacoma, Wash.....	General.....	5,234	5,525	4,487
Cerigo.....	14	18.50	16	8.45	16	17.35	16	19.00	German.....	Hamburg-American Line	227.0	34.0	14.0	Cristobal, C. Z.....	Guayaquil, Ecuador	General.....	150	1,572	1,011
Arto.....	16	4.00	16	8.35	16	17.41	16	20.00	American.....	Standard Transp. Co....	435.6	55.2	21.0	Providence, R. I.....	Los Angeles, Calif	Ballast.....	.....	7,386	5,117
Knutson ¹	16	7.00	16	10.40	16	18.10	16	21.14	Norwegian.....	Anglo-Saxon Pet. Co....	450.5	59.2	20.3	New York, N. Y.....	Los Angeles, Calif	Ballast.....	.....	8,045	5,592
Sabotawan.....	16	9.10	16	12.05	16	19.40	16	20.55	American.....	Redwood Line.....	338.2	52.2	23.6	New Orleans, La.....	Seattle, Wash.....	General.....	6,106	5,708	4,738
Standard Arrow.....	16	10.00	16	13.05	16	20.48	16	22.08	American.....	Standard Transp. Co....	407.6	62.7	23.0	New York, N. Y.....	Los Angeles, Calif	Ballast.....	.....	9,698	6,883
Unden.....	16	10.10	16	14.05	16	21.55	16	23.12	Swedish.....	Transatlantic S. S. Co.	366.0	51.6	25.0	Antwerp, Belgium	San Francisco, Cal.	Silver sand	5,000	5,336	3,708
Lobos.....	16	16.10	17	6.00	17	13.05	17	18.41	British.....	Pacific Steam Nav. Co.	404.7	52.4	25.0	Hull, England.....	Magallanes, Chile.	General.....	7,355	7,151	4,756
Ousebridge.....	16	21.30	17	6.05	17	13.48	17	15.15	British.....	N. of England S. S. Co.	406.0	56.0	16.0	Norfolk, Va.....	British Columbia	Ballast.....	.....	6,800	5,142
Steel Inventor.....	17	4.30	17	7.20	17	15.00	17	16.10	American.....	Isithian S. S. Lines.....	424.0	46.5	25.0	Baltimore, Md.....	Vancouver, B. C.....	Ballast.....	.....	7,423	7,611
Dionede.....	17	7.00	17	7.20	17	15.10	17	16.50	British.....	British Government.....	445.0	46.5	17.4	Kingston, Jamaica.	New Zealand.....	Ballast.....	.....	8,204	6,197
Liberator.....	17	5.10	17	8.15	17	15.47	17	16.50	American.....	Tampa Inter-ocean Co..	410.0	56.0	24.4	New Orleans, La.....	Taiingtao, China.....	General.....	5,240	8,204	6,197
Silksworth.....	17	8.40	17	9.40	17	17.41	17	18.41	British.....	R. S. Dalglissh, Ltd.....	415.0	53.0	15.8	Newcastle, England	Vancouver, B. C.....	Ballast.....	.....	6,530	4,623
Dramatis.....	16	13.35	17	11.15	17	18.17	17	19.28	British.....	T. & J. Harrison.....	410.0	52.0	17.2	Liverpool, England	Nauvau, B. C.....	General.....	.....	6,202	4,151
Alvarado.....	15	20.35	17	12.05	17	19.13	17	20.26	British.....	Pacific Steam Nav. Co.	393.0	43.0	16.0	New York, N. Y.....	Callao, Peru.....	General.....	666	2,844	1,748
Leme.....	16	20.45	17	13.15	17	21.15	17	22.30	Italian.....	Nav. Libera-Triestina	450.0	57.0	14.0	Naples, Italy.....	Vancouver, B. C.....	General.....	1,244	8,805	6,497
Santa Elisa.....	17	14.55	18	6.10	18	12.48	19	2.54	American.....	Grace Line.....	369.3	51.7	24.7	New York, N. Y.....	Valparaiso, Chile.	General.....	2,441	5,957	4,325
Gettrude.....	17	21.50	18	6.20	18	13.41	18	14.35	Danish.....	A. P. Moller.....	419.0	55.0	23.0	New York, N. Y.....	Saigon, China.....	General.....	4,912	7,385	5,500
San Gabriel.....	18	7.25	18	7.35	18	15.07	18	16.05	American.....	Pacific Atlantic S. S. Co.	387.0	52.2	15.0	Baltimore, Md.....	Portland, Oreg.....	Gen. lmb. oil	1,585	5,719	4,023
El Lobo.....	18	8.05	18	8.20	18	15.32	18	16.50	British.....	Atlantic Refining Co..	385.2	51.7	19.3	Philadelphia, Pa.....	Los Liberaid, Ecua.	Ballast.....	.....	4,851	3,326
Texan.....	18	9.40	18	9.45	18	16.57	18	19.04	American.....	Amer-Hawaiian Line...	471.0	57.2	18.0	Boston, Mass.....	Tacoma, Wash.....	General.....	1,812	9,154	6,906
S. C. T. Dodd.....	18	10.30	18	10.45	18	17.41	18	18.30	American.....	Standard Oil Co.....	425.0	57.2	19.6	Philadelphia, Pa.....	Los Angeles, Calif	Ballast.....	.....	7,481	4,975
Constance.....	18	16.00	18	16.15	19	9.58	19	11.04	American.....	Arrow Line.....	409.0	54.0	17.0	Baltimore, Md.....	Seattle, Wash.....	General.....	2,822	6,621	4,891
Chandler.....	18	5.15	19	6.10	19	14.26	19	20.23	American.....	Panama Mail S. S. Co.	479.0	48.7	23.0	New York, N. Y.....	San Francisco, Cal	Coffee, general.	1,254	6,015	4,281
Colombia.....	17	14.05	19	6.10	19	14.42	19	15.40	American.....	U. S. Navy.....	455.0	56.0	21.0	Cristobal, C. Z.....	Los Angeles, Calif	Ballast.....	.....	3,100	6,081
Cuyama.....	19	6.50	19	7.25	19	15.12	19	16.10	Norwegian.....	Fern Line.....	377.6	54.0	18.6	Galveston, Tex.....	Shanghai, China.....	Cotton.....	.....	6,081	4,538
Robert.....	19	7.05	19	8.20	19	15.42	19	16.40	American.....	Lukenbach Line.....	445.0	58.0	19.0	Boston, Mass.....	Portland, Oreg.....	General.....	3,519	8,695	6,375
Castilla.....	19	4.05	19	11.40	19	19.30	20	00.32	Chilean.....	Hilmeister-Valparaiso	180.5	23.1	8.0	Hamburg, Germany	Valparaiso, Chile	Cement.....	102	302	203
Los Angeles.....	18	16.55	19	12.20	19	22.20	19	22.30	German.....	Hamburg-American Line	432.2	59.1	23.3	Hamburg, Germany	Vancouver, B. C.....	General.....	5,591	8,454	6,344

¹ Tanker. ² Motor ship. ³ Cruiser. ⁴ For orders. ⁵ Steel, tinplate, and hardware. ⁶ Steel and canned goods.

Albacorn	18	90.50	19	15.00	19	21.42	20	22.50	Norwegian.	Fred Olsen & Co.	435.0	56.0	24.5	Oslø, Norway.	Vancouver, B. C.	General.	5,104	8,005	5,953
Lincoln	19	14.35	20	7.00	20	13.07	20	14.30	British.	Pacific Steam Nav. Co.	550.0	97.0	28.8	Liverpool, England.	Tacahumo, Chile.	General.	3,179	16,844	11,731
Orbita	20	3.30	20	7.00	20	13.47	20	21.25	American.	Roosevelt S. S. Co., S.B.	412.0	55.0	21.0	New York, N. Y.	Gen. case oil.	General.	4,742	7,342	5,247
Ward	13	16.35	20	8.40	20	11.33	21	15.05	Norwegian.	U. S. Navy.	225.0	41.0	19.6	Bluefields, Nic.	Balboa, C. Z.	Ballast.	7,559	5,044	
Montevideo	5	15.50	20	18.30	20	11.33	21	15.05	American.	Peo. Stor. & Fin. Corp.	442.7	58.0	19.6	Jarrow, England.	Los Angeles, Calif.	Ballast.	7,559	5,044	
Rocheester	20	14.30	21	6.00	21	13.39				U. S. Navy.	380.0	64.0	28.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	7,559	5,044	
Washington	20	7.45	21	6.00	21	14.04	21	15.20	Japanese.	Kokusan Kisen Kaisha.	385.0	61.0	15.1	Kingston, Jamaica.	Chile.	Ballast.	5,919	4,400	
Maru	21	5.55	21	7.15	21	15.07	21	16.40	British.	Com'lth & Dom. Line.	480.3	59.5	23.7	New York, N. Y.	Freanante, Aust'lia	General.	1,642	10,785	8,141
Port Darwin	20	13.20	21	8.05	21	15.21	21	16.40	British.	Furness, Withy & Co.	410.0	58.0	19.4	Glasgow, Scotland.	Vancouver, B. C.	General.	1,332	7,892	5,858
Shipper	20	17.35	21	8.15	21	16.09	21	19.00	British.	Lobitos Oilfields.	459.0	60.0	20.0	Glasgow, Scotland.	Los Angeles, Calif.	Ballast.	8,416	5,805	
El Mirlo	21	0.35	21	8.50	21	16.58	21	18.05	Danish.	DuPont & Co.	385.0	54.0	13.5	Baltimore, Md.	Coronel, Chile.	General.	3,000	6,591	4,936
Norhavet	21	0.35	21	10.25	21	18.12	21	19.15	Chilean.	Ga. Sud. Amer. de Vap	422.8	56.2	24.6	New York, N. Y.	Valparaiso, Chile.	General.	1,625	7,764	4,705
Aroncaqua	21	13.25	21	13.35	21	20.55	21	22.15	American.	Tidewater Oil Co.	435.0	56.0	21.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	7,441	5,077	
Dilworth	21	13.25	21	13.35	21	20.55	21	22.15	American.	Tidewater Oil Co.	435.0	56.0	21.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	7,441	5,077	
City of San Francisco	17	16.45	22	6.05	22	13.35	22	15.30	American.	Panama Mail S. S. Co.	296.1	45.0	16.6	Cristobal, C. Z.	San Francisco, Cal.	General.	898	3,848	2,606
Saramacca	21	6.00	22	6.10	22	13.30	22	15.30	American.	United Fruit Co.	337.7	42.0	17.0	Cristobal, C. Z.	San Francisco, Cal.	Ballast.	3,680	2,308	
Port Huon	22	6.20	22	6.25	22	14.28	22	22.35	British.	Com'lth & Dom. Line.	436.0	63.3	22.0	London, England.	Wellington, N. Z.	General.	6,392	10,720	7,692
Lontian	22	7.03	22	7.45	22	15.20				Trinidad Leaseholds.	368.0	63.0	22.0	London, England.	Wellington, N. Z.	General.	6,392	10,720	7,692
Tararanga	22	9.35	22	9.20	22	16.54	22	20.25	Norwegian.	Westfal Leaseholds.	394.0	54.6	18.11	Kingson, Jamaica.	Balboa, C. Z.	Ballast.	4,950	3,228	
Canca	15	21.15	22	9.20	22	17.58	22	21.15	Colombian.	National Navigation Co.	107.0	22.6	19.0	Buenos Aires, Arg.	Vancouver, B. C.	General.	3,625	6,358	5,308
Ivo Kveic	22	6.50	22	9.55	22	18.00	22	19.15	Yugoslav.	Yugoslav Lloyd, Ltd.	353.4	49.1	22.5	London, England.	Vancouver, B. C.	General.	175	238	163
San Antonio	22	7.10	22	11.45	22	18.37	22	19.55	American.	States S. S. Co.	409.0	54.0	19.0	Philadelphia, Pa.	Seattle, Wash.	General.	4,877	4,470	3,288
Kenowis	21	6.10	22	13.29	22	19.45	22	20.50	American.	U. S. Army.	390.0	54.2	19.6	Brooklyn, N. Y.	Honolulu, T. H.	Army equipment	2,852	6,755	4,887
Point Fermat	22	11.30	22	12.35	22	20.15	22	21.50	American.	Swayne & Hoyt.	324.0	46.0	20.6	Philadelphia, Pa.	Seattle, Wash.	General.	2,852	6,755	4,887
Yanksee Arrow	22	13.25	22	13.50	22	21.05	22	22.35	American.	Standard Oil Co.	408.3	62.7		New York, N. Y.	Los Angeles, Calif.	Ballast.	3,202	3,984	2,617
Hawaiian	22	13.50	22	15.15	22	21.95	22	22.55	American.	Amer.-Hawaiian Line.	404.0	53.0	18.0	Boston, Mass.	Portland, Oreg.	General.	2,408	6,766	4,767

* Tanker. 7 Gunboat. 8 For dry-docking. 9 Transport. 10 Bones, fertilizer, brim, coffee, etc.

Virgil	15	21.35	16	6.16	16	14.10	17	7.35	Norwegian.	Anglo-Saxon Pet. Co.	420.3	57.2	26.0	Los Angeles, Calif.	Lands End, Eng.	Gasoline.	9,523	7,442	5,132
Kmai Maru	15	13.35	16	6.37	16	15.35	16	19.55	Japanese.	Osaka Shosen Kaisha.	446.0	61.5	22.0	Shanghai, China.	Baltimore, Md.	General.	1,433	8,982	6,272
Cities Service	16	4.50	16	7.11	16	16.40	16	16.40	American.	Cities Service Trans. Co.	431.0	59.2	27.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline.	9,689	8,093	5,347
Oklahoma	15	19.30	16	7.47	16	17.50	16	17.50	British.	Blue Star Line.	423.5	54.7	22.0	Bellingham, Wash.	Hamburg, Germany	General.	4,401	7,521	5,852
Gotha Star	15	19.30	16	7.47	16	17.50	16	17.50	American.	H. W. Post.	369.2	51.9	25.0	Balboa, C. Z.	Cristobal, C. Z.	Ballast.	7,040	4,775	3,429
Echo	16	2.45	16	8.34	16	19.09	16	19.00	Greek.	S. Livanos & Co.	431.2	56.4	24.5	Mejillones, Chile.	Azores	Nitrates.	7,141	7,196	4,956
Georgios	16	5.30	16	8.56	16	18.30	16	22.10	American.	North German Lloyd	409.8	53.8	22.0	Valparaiso, Chile.	Hamburg, Germany	General.	6,427	7,173	5,514
Athen	16	7.10	16	9.39	16	19.50	17	1.10	German.	Hamburg-Amer. Line	411.7	54.5	28.0	Valparaiso, Chile.	Hamburg, Germany	General.	8,800	6,957	5,133
Albert Vogler	16	11.30	16	13.44	16	23.40	16	22.10	British.	Sir W. R. Smith & Sons.	376.0	52.3	52.3	Longview, Wash.	Cobh, Ireland	Wheat.	5,914	5,455	3,879
Welsh City	16	13.16	16	14.37	16	21.45	16	21.45	American.	Pacific Atlantic S. S. Co.	475.4	55.0	21.1	Longview, Wash.	Baltimore, Md.	Lumber, general.	2,881	5,455	3,879
San Diego	16	13.55	16	6.11	17	14.05	19	6.10	American.	U. S. Navy.	490.4	52.3	24.0	Los Angeles, Calif.	Cristobal, C. Z.	Nitrates.	7,400	5,710	4,022
Cuyama	16	13.10	17	6.58	17	14.55	17	15.50	British.	J. & J. Deebolin.	400.4	51.2	24.0	Antofagasta, Chile.	Azores	Nitrates.	7,400	5,710	4,022
Grangepark	16	23.00	17	6.58	17	14.55	17	15.50	British.	Nautilus S. S. Co.	400.4	51.2	24.0	Corral, Chile.	Liverpool, England	Nitrates, general.	6,219	5,208	3,578
Hazel Branch	16	23.00	17	7.18	17	16.03	17	16.00	British.	Nautilus S. S. Co.	400.4	51.2	24.0	Corral, Chile.	Liverpool, England	Nitrates, general.	6,219	5,208	3,578
Eastern Sun	17	7.30	17	8.10	17	17.25	17	17.25	American.	Sun Oil Co.	480.6	66.0	29.0	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline.	13,241	9,607	6,551

11 Motor ship. 12 Launch. 13 For orders. 14 Fuel oil and gasoline.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or Operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
City of San Francisco ¹⁵	17	8.06	17	9.16	17	16.45			American...	Panama Mail S. S. Co.	296.1	45.9	16.3	Buena Ventura, Col.	Cristobal, C. Z.	Coffee	112	3,848	2,606
City of Vancouver	17	10.30	17	11.46	17	21.18	19	00.10	British...	Can.-Amer. S. S. Co.	411.5	54.1	26.0	Vancouver, B. C.	Leith, Scotland	Lumber, general.	7,500	6,614	4,995
Belmore	19	22.30	17	15.14	18	13.20	18	13.20	American...	Ore S. S. Corp.	550.3	72.2	31.0	Cruz Grande, Chile	New York, N. Y.	Iron ore	20,669	15,476	4,254
Wicks, No. 75	17	9.30	18	6.40	18	14.40	19	9.11	American...	U. S. Navy	310.0	31.0	9.0	San Diego, Calif.	Hampton Rds., Va.				
Dolph, No. 76	17	9.30	18	6.40	18	14.40	19	9.11	American...	U. S. Navy	310.0	31.0	9.0	San Diego, Calif.	Hampton Rds., Va.				
Harris, No. 78	17	9.30	18	6.29	18	14.55	19	9.11	American...	U. S. Navy	310.0	31.0	9.0	San Diego, Calif.	Hampton Rds., Va.				
Hannibal, No. 41	17	9.30	18	6.29	18	14.55	19	9.11	American...	U. S. Navy	310.0	31.0	9.0	San Diego, Calif.	Hampton Rds., Va.				
Pacific The.	17	19.45	18	6.35	18	14.30	18	14.50	American...	Dimon S. S. Corp.	410.5	54.3	25.0	Seattle, Wash.	Norfolk, Va.	Lumber, general.	7,504	6,583	4,808
Minnesota	18	3.35	18	7.12	18	15.35	18	15.35	American...	Amer.-Hawaiian Line	407.7	53.7	25.0	Portland, Oreg.	Boston, Mass.	General.	6,600	7,150	5,024
Walter A.	18	6.05	18	7.44	18	16.05	18	20.15	American...	Lackenbach Line	446.5	56.1	29.0	Portland, Oreg.	Boston, Mass.	(*)	6,990	8,785	6,567
Anna	18	6.10	18	8.06	18	16.45	18	16.45	Danish...	A. P. Moller	390.6	53.7	26.0	Los Angeles, Calif.	Lands End, Eng.	Gasoline	7,656	6,012	4,097
Maersk ¹⁵	18	6.15	18	11.24	18	18.20	19	00.30	Danish...	Pacific Steam Nav. Co.	420.5	54.2	26.0	Corral, Chile	Hull, England	General	6,960	7,139	4,640
Laguna	18	11.20	18	11.24	18	19.50	19	35.55	British...	H. M. Thomson	412.5	55.5	28.0	Taitai, Chile	Azores ¹⁹	Nitrates	9,300	6,778	4,837
Bosworth	18	11.45	18	12.45	18	20.30	18	20.30	American...	Charles Nelson & Co.	386.6	52.2	24.0	Seattle, Wash.	New York, N. Y.	Lumber, general.	6,213	5,699	4,167
American Star.	18	1.00	18	15.10	18	22.00	19	11.55	American...	U. S. Army	448.0	58.0	24.3	San Francisco, Cal.	Brooklyn, N. Y.	War Dept. gen.	200		
Cannal ¹⁷	18	3.00	18	15.10	18	22.00	19	11.55	American...	Ore S. S. Corp.	550.3	72.2	31.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	21,150	15,551	4,297
Steele	18	12.10	19	6.00	19	16.25	19	16.25	American...	Panama Mail S. S. Co.	380.0	48.7	23.0	San Francisco, Cal.	New York, N. Y.	General	3,500	6,033	4,353
Venezuela	18	23.45	19	7.50	19	17.15	19	17.15	American...	East Asiatic Co.	410.0	55.2	29.0	Vancouver, B. C.	Copenhagen, Den.	General	8,909	7,067	5,285
Aman ¹⁸	19	6.00	19	8.30	19	16.25	19	16.25	Danish...	Roland Line	216.5	32.9	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	Sugar	964	1,105	698
Tregenna	19	16.30	19	8.30	19	22.45	19	23.50	German...	Hain S. S. Co.	400.1	52.3	25.0	Pimental, Peru	Marsailles, France	General	7,715	5,734	4,080
Nordbo ¹⁸	19	16.00	19	16.25	19	20.10	19	20.10	Danish...	Inter. Freightng Line	380.0	48.9	23.0	Portland, Oreg.	English Channel ¹⁹	Wheat	7,900	6,190	4,569
Armita	19	17.00	19	17.32	19	20.10	20	13.10	German...	Hamburg-American Line	360.0	53.0	25.0	Portland, Oreg.	Cristobal, C. Z.	Ballast	4,820	4,701	3,297
Roche ¹⁸	19	15.00	19	17.32	19	20.10	20	13.10	American...	Inter. Freightng Line	384.0	61.9	26.0	Corral, Chile	Savannah, Ga.	Sugar	9,299	7,394	5,099
Huevos ¹⁸	19	18.40	20	6.31	20	14.30	21	6.00	American...	Richfield Oil Co.	434.8	56.2	27.0	Los Angeles, Calif.	Cristobal, C. Z.	Gasoline	154	270	735
Salvador	19	21.40	20	6.24	20	14.30	21	6.00	British...	Pacific Steam Nav. Co.	215.0	33.5	12.4	Champerco, Guat.	Cristobal, C. Z.	Nitrates	6,490	4,638	3,296
Harriet	19	21.30	20	7.00	20	15.45	20	17.30	British...	Farco Shipping Co.	370.0	50.6	23.0	Taitai, Chile	Azores ¹⁹	Nitrates	8,349	10,332	7,466
Oregona	20	6.55	20	8.31	20	15.45	21	00.05	French...	French Line	470.3	61.2	27.0	Seattle, Wash.	Azores ¹⁹	General	5,648	6,719	4,681
Modena ¹⁵	20	8.45	20	9.37	20	19.50	20	21.05	British...	Donaldson Brothers	387.0	53.7	27.0	Victoria, B. C.	Glasgow, Scotland	General	8,487	8,322	6,228
Zealandia ¹⁵	19	11.45	20	10.45	20	17.25	20	17.25	British...	Shaw, Savill & Albion	482.6	64.2	25.0	Auckland, N. Z.	London, England	Frozen, general.	5,766	11,819	8,367
David	21	2.30	21	6.24	21	14.15	21	14.15	American...	Tide-water Oil Co.	430.0	59.2	25.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	8,536	7,629	5,925
McKevoy ¹⁵	20	15.00	21	7.10	21	15.00	21	16.10	American...	United Fruit Co.	336.7	42.0	20.0	San Francisco, Cal.	Cristobal, C. Z.	General	4,977	3,668	2,308
Saramacca	20	00.21	21	1.10	21	14.50	21	14.50	American...	Charles Nelson & Co.	324.0	46.2	23.0	Seattle, Wash.	New York, N. Y.	Lumber, general.	4,267	3,984	2,628
Chetopa	21	4.00	21	7.43	21	15.25	21	15.25	American...	Amer.-Hawaiian Line	491.5	58.2	30.0	Seattle, Wash.	Boston, Mass.	Lumber, general.	8,900	10,491	7,601
Virginia	21	4.00	21	7.43	21	15.25	21	15.25	American...	Amer.-Hawaiian Line	491.5	58.2	30.0	Seattle, Wash.	Boston, Mass.	Lumber, general.	8,900	10,491	7,601

¹⁵ Motor ship. ¹⁶ Destroyer. ¹⁷ Transport. ¹⁸ Cruiser. ¹⁹ For orders. ²⁰ Lumber, canned goods, and hay. ²¹ Fresh fruits and general.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., December 3, 1930. No. 18.

Canal Traffic During November.

During the month of November, 1930, 479 commercial vessels and 4 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,098,357.36, and on the launches \$20.22, or a total tolls collection of \$2,098,377.58.

The daily average of commercial vessels was 15.96, and the average tolls collection was \$69,945.25, as compared with an average of 16.68 transits and \$73,838.13 in tolls for the previous month, and an average of 17.5 transits and \$74,829.96 in tolls for November, 1929. The average amount of tolls paid by each of the commercial transits was \$4,380.70, as compared with \$4,427.43 for the month of October, 1930.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 11 months of the current calendar year, with the daily averages of transits and tolls, and the totals for the first 11 months of the calendar years 1929 and 1928:

	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January	531	\$2,360,211.24	17.13	\$76,135.84
February	491	2,131,386.12	17.54	76,120.93
March	515	2,260,002.36	16.61	72,903.30
April	489	2,232,763.00	16.30	74,425.43
May	479	2,162,898.60	15.45	69,770.92
June	478	2,100,994.53	15.93	70,033.15
July	488	2,180,511.82	15.74	70,339.09
August	465	2,080,230.42	15.00	67,104.21
September	458	2,057,103.58	15.26	68,570.12
October	517	2,288,982.08	16.68	73,838.13
November	479	2,098,357.36	15.96	69,945.25
Total, first 11 months of calendar year, 1930	5,390	23,953,441.11	16.14	71,716.89
Total, first 11 months of calendar year, 1929	5,908	25,283,713.94	17.69	75,669.74
Total, first 11 months of calendar year, 1928	5,755	23,932,933.02	17.18	71,441.59

As compared with the first 11 months of the calendar year 1929, the corresponding period this year has had 518 fewer transits and \$1,330,272.83 less tolls.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 24, 1930.

No. 808.

Panama, west coast, South Frailes Island light, visibility lessened. Since being changed from flashing white to flashing red (see Notice to Mariners No. 799, Balboa Heights, November 14, 1930), the visibility of South Frailes Island light has been lessened from 15 miles to about 10 miles. Navigators should bear this in mind when trying to sight the light.

J. L. SCHLEY,
Acting Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, November 29, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or Operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Pendone *	23	6.40	23	6.55	23	17.48	23	17.05	Danzig	W. Tankership Rhederl	470.0	63.0	19.0	Hamburg, Germany	Talara, Peru.	Ballast.	8,939	6,127	
Pacific Spruce.	23	8.15	23	8.20	23	15.04	23	17.05	American	Dimit S. Corp.	410.5	54.0	17.6	Philadelphia, Pa.	Seattle, Wash.	General	3,544	6,624	
Pacific Spruce.	19	16.25	23	10.00	23	16.26	23	18.00	German	Rotund Line	216.3	32.9	12.3	Christobal, C. Z.	Guxayquil, Ecuador	General	234	1,105	698
Porter *	23	9.45	23	10.40	23	17.48	23	23.35	British	Anglo-Saxon Pet. Co.	426.0	56.0	19.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,149	4,927	
Porter *	23	4.30	23	13.30	23	20.55	23	22.30	British	Shaw, Savill & Albion.	500.3	63.3	26.7	London, England.	Wellington, N. Z.	General	4,153	12,821	9,907
Corinthia.	23	20.15	23	6.15	23	19.45	23	19.45	American	George Herman	398.5	53.8	20.0	Sancti Spiriti, C. Z.	Watson, C. Z.	Ballast	4	4	4
Chimney	24	8.20	24	7.15	24	14.14	24	15.45	British	F. & W. Tutson.	309.7	70.3	23.0	No. Shields, Eng.	Corral, Chile.	General	3,600	5,701	3,881
Australia *	24	6.35	24	7.15	24	14.14	24	15.30	American	The Texas Co.	398.7	70.3	23.0	New York, N. Y.	Los Angeles, Calif.	Ballast	12,514	8,427	
Midway	24	8.05	24	8.20	24	15.39	24	16.50	American	Luckenbach Line.	434.3	57.7	22.3	Mobile, Ala.	Tacoma, Wash.	General	5,963	7,977	5,764
Thyra	24	4.05	24	10.40	24	18.24	24	20.00	Norwegian	William Hansen.	270.0	38.0	17.6	Tampico, Mexico.	Iquique, Chile.	Asphalt.	2,101	1,910	1,192
Nonumber	25	00.55	25	6.20	25	14.05	25	18.20	British	Federal Steam Nav. Co.	530.0	63.0	30.3	Falmouth, England	N. Plymouth, N. Z.	General	8,438	13,268	9,124
And	24	22.50	25	7.30	25	14.28	25	16.55	Swedish	Traktatbolaget.	392.0	52.6	17.8	New York, N. Y.	Arica, Chile.	Ballast	5,764	4,078	
Mermaid *	25	3.35	25	8.30	25	15.41	25	16.55	Norwegian	Dern Line	382.7	35.4	10.7	New Orleans, La.	Los Angeles, Calif.	Ballast	6,082	4,222	
Ferdale *	24	16.30	25	1.05	25	17.51	25	17.30	British	Donaldson Brothers.	355.6	31.6	17.7	Glasgow, Scotland	Yancover, B. C.	General, bananas	651	6,576	4,724
Movena *	25	8.30	25	14.30	25	21.25	25	20.30	German	Hamburg-American Line	400.9	54.6	19.9	Hamburg, Germany	Valparaiso, Chile.	General	2,798	6,791	4,997
Spearsid	25	6.20	26	4.00	26	14.14	26	22.37	Dutch	Royal Neth. S. S. Co.	473.5	63.6	22.0	Hamburg, Germany	Chile.	General	4,138	11,638	7,744
Aurward	25	18.40	26	6.15	26	15.01	26	16.18	British	Barber S. Line.	464.6	60.3	24.7	New York, N. Y.	Yokohama, Japan.	Gen., case oil	6,223	8,805	6,035
Castle *	25	21.30	26	7.20	26	15.06	26	16.18	British	Kerr S. Co.	450.0	61.0	24.0	New York, N. Y.	Shanghai, China.	General	6,420	9,311	6,524
Silver Willow	25	23.00	26	7.35	26	15.43	26	16.50	American	Standard Oil Co.	410.0	56.0	20.6	New York, N. Y.	Los Angeles, Calif.	Ballast	8,201	6,226	
Engle *	26	1.05	26	5.30	26	10.25	26	17.31	American	Nelson Line.	377.0	52.0	18.6	New York, N. Y.	Seattle, Wash.	General	3,289	5,434	3,969
Democracy	26	1.05	26	5.30	26	10.25	26	17.31	American	Nelson Line.	377.0	52.0	18.6	New York, N. Y.	Seattle, Wash.	General	3,289	5,434	3,969
Katrina	26	4.00	26	9.24	26	16.32	26	17.31	American	Luckenbach Line	446.0	55.0	24.1	New York, N. Y.	Seattle, Wash.	General	3,817	8,508	6,179
India Arrow	26	6.20	26	9.55	26	17.30	26	18.45	American	Standard Transp. Co.	488.3	52.7	21.0	Boston, Mass.	Los Angeles, Calif.	Ballast	10,084	7,388	
Santa Clara.	26	4.15	26	13.27	26	23.47	27	9.30	American	Race Line	383.3	63.9	24.10	New York, N. Y.	Yaparaos, Chile.	General	2,767	11,680	7,442
Pueblo *	26	13.25	26	14.10	26	22.17	26	23.23	American	Refined Oil Co.	340.0	49.6	19.0	Baltimore, Md.	Los Angeles, Calif.	Ballast	4,613	2,896	
Orcida.	26	13.25	26	14.10	26	22.17	26	23.23	American	Refined Oil Co.	340.0	49.6	19.0	Baltimore, Md.	Los Angeles, Calif.	Ballast	4,613	2,896	
Salie *	26	13.45	26	15.15	26	23.00	27	00.25	Norwegian	Chief Motor Co.	231.0	33.1	18.6	Chester, Pa.	San Francisco, Cal.	Auto, parts	2,246	2,626	1,621
Biscaya *	26	16.55	26	18.40	26	23.00	27	03.15	German	Chloro-Nitrate Co.	412.8	49.1	18.6	Norfolk, Va.	Arica, Chile.	Ballast	8,580	5,240	
Washington	26	8.45	27	6.20	27	12.43	27	13.15	French	Anglo-Amer. Oil Co.	470.0	58.2	20.0	Glasgow, Scotland	Los Angeles, Calif.	Ballast	6,585	4,465	
Newadan	26	22.07	27	0.20	27	14.30	27	15.30	American	Amer.-Danish Line	400.0	58.8	19.0	Boston, Mass.	Los Angeles, Calif.	General	3,358	10,332	7,675
Texmar	26	22.55	27	7.15	27	14.30	27	16.00	American	Calmor S. Corp.	404.6	54.3	22.0	Baltimore, Md.	Seattle, Wash.	General	1,684	6,829	4,627
Santa Cecilia	26	4.10	27	7.15	27	14.45	27	16.00	American	Wagonat S. S. Line.	404.6	54.3	22.0	Baltimore, Md.	Seattle, Wash.	General	1,684	6,829	4,627
Paul Shop *	26	17.50	27	8.45	27	15.43	27	17.35	American	Wagonat S. S. Line.	431.4	58.2	18.0	New York, N. Y.	Tacoma, Wash.	General	7,765	9,743	4,869
Nosa Prince.	26	17.50	27	9.35	27	16.33	27	18.54	American	N. O. & E. S. S. Co.	324.0	46.0	18.8	New Orleans, La.	Talcahuano, Chile.	Ballast	2,757	3,983	2,970

* Launch.
* Motor ship.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.	Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.									Tons.	Gross.	Net.
Portmar	25	6:20	25	9:35	25	17:50	25	17:50	American.	Calmar S. S. Corp.	409.8	54.2	25.4	Olympia, Wash.	Baltimore, Md.	Lumber	7,586	6,531
Point Arena	25	11:06	25	11:06	25	18:25	25	18:25	American.	Swayne & Hoyt	324.0	46.2	18.1	Portland, Oreg.	New Orleans, La.	General	2,428	3,984
El Lobo	25	14:30	25	19:12	26	11:10	26	11:10	British.	C. P. Bowring & Co.	385.2	51.0	23.0	La Libertad, Equ.	Philadelphia, Pa.	Crude oil	6,088	4,851
Marco	25	4:49	26	16:40	26	15:40	26	15:40	American.	Ore S. S. Corp.	522.3	72.2	31.4	Cruz Grande, Chile	Baltimore, Md.	Iron ore	21,161	15,351
Teno	25	20:35	26	6:37	26	14:25	26	14:25	Chilean.	Cha.Sud. Amer. de Vap.	430.8	56.2	25.0	Talcahuano, Chile	New York, N. Y.	General	3,686	7,764
Vancouver	25	17:45	26	7:37	26	16:55	26	21:40	German.	Hamburg-American Line	477.5	63.1	28.0	Balboa, C. Z.	Hamburg, Germany	General	8,701	10,267
S-10 ⁹	26	8:07	26	17:50	26	17:50	26	17:50	American.	U. S. Navy	231.0	29.0	20.0	Balboa, C. Z.	Cristobal, C. Z.	Ballast	.....	.....
S-11 ⁹	26	8:11	26	17:30	26	17:30	26	17:30	American.	U. S. Navy	225.0	29.0	20.0	Balboa, C. Z.	Cristobal, C. Z.	Ballast	.....	.....
Primerio ¹⁰	26	2:00	26	8:19	26	17:30	26	19:30	Norwegian.	Moore & McCormack	388.5	53.7	23.3	N. Westin, B. C.	Boston, Mass.	Lumber	6,600	5,704
S-12 ⁹	26	9:00	26	17:50	26	17:50	26	17:50	American.	U. S. Navy	231.0	29.0	20.0	Balboa, C. Z.	Cristobal, C. Z.	Ballast	.....	.....
S-13 ⁹	26	9:00	26	17:50	26	17:50	26	17:50	American.	U. S. Navy	231.0	29.0	20.0	Balboa, C. Z.	Cristobal, C. Z.	Ballast	.....	.....
Dorothy Cahill	26	6:42	26	9:02	26	19:45	26	20:45	British.	Arrow Line	410.0	54.2	24.0	Willapa Har., Wash	New York, N. Y.	Lumber	7,072	6,579
Bengloe	26	9:40	26	10:06	26	21:05	26	22:40	British.	Ben Line Steamers, Ltd.	405.0	52.6	25.0	Vancouver, B. C.	Wheat, general	7,635	5,870	
Kitty Taylor	26	5:00	26	12:24	26	22:10	27	1:55	British.	Lambert Bros., Ltd.	315.0	53.6	25.0	Iquique, Chile.	Nitrates	8,050	6,115	
Tai Yang ¹⁰	26	3:00	26	12:24	26	22:10	27	1:55	Norwegian.	Barber Wilhelmsen Line	481.4	69.0	30.0	Davao, P. I.	General	4,118	10,009	
Trojan Star	26	23:00	26	15:36	27	10:55	27	10:55	British.	Blue Star Line	473.0	69.0	30.0	Newcastle-on-Tyne	General	6,300	10,405	
Illinois	26	21:45	27	6:10	27	13:40	27	13:45	American.	The Texas Co.	416.8	56.1	25.0	Los Angeles, Calif.	Gasoline	7,433	6,945	
Nipper Star	26	21:00	27	6:50	27	14:39	27	15:55	British.	Blue Star Line	476.8	67.3	26.0	Seattle, Wash.	Frozen, general	5,279	11,635	
William A. McKenney	26	24:00	27	7:18	27	15:15	27	15:15	American.	Mystic S. S. Co.	395.0	55.1	28.0	Portland, Oreg.	Whilmington, Del.	Lumber	7,900	6,993
Rangitata ¹¹	26	7:30	27	8:15	27	15:45	27	15:45	British.	N. Z. Shipping Co.	531.0	70.2	28.0	Auckland, N. Z.	London, England	Frozen, general	6,537	18,206
Alkmarr	27	7:00	27	8:40	27	16:40	27	21:45	Dutch.	Royal Neth. S. S. Co.	447.2	62.7	28.0	Corral, Chile	Amsterdam, Holl d	General	10,737	9,536
Shepard ¹⁰	27	12:45	27	13:40	27	21:30	28	1:00	Norwegian.	A. F. Klaveness & Co.	379.6	53.2	24.0	Wilyalla, Australia	New York, N. Y.	Iron ore	6,851	6,079
Katoulo	27	15:15	27	15:28	28	8:55	28	8:55	Greek.	Georges M. Assinonitis	389.8	54.0	25.0	Antofagasta, Chile	Azores ¹²	Nitrates	7,640	5,601
Lebore	27	3:45	28	6:17	28	15:40	28	15:40	American.	Ore S. S. Corp.	549.6	72.2	32.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	21,530	14,323
Kalfari	27	23:45	28	7:00	28	15:50	28	15:50	Norwegian.	M. S. Steen	429.0	53.6	25.0	Vancouver, B. C.	Hull, England	Lumber, general	8,500	7,067
Riverton	28	2:00	28	8:32	28	18:35	28	18:35	British.	R. Chapman & Son	409.6	54.0	24.4	Vancouver, B. C.	Baltimore, Md.	Wheat	7,964	5,761
Manzales	28	7:30	28	8:35	28	18:35	29	1:00	German.	Roland Line	216.5	32.9	13.0	Guayaquil, Ecuador	Cristobal, C. Z.	General	6,083	1,132
Orduna	28	9:00	28	9:36	28	18:35	29	1:00	British.	Pacific Steam Nav. Co.	599.0	67.0	30.0	Talcahuano, Chile	Liverpool, England	Lumber, general	6,583	17,146
Missourian ¹¹	28	11:00	28	10:26	28	19:30	28	19:30	American.	Amer.-Hawaiian Line	445.1	59.4	27.0	Tacoma, Wash.	Boston, Mass.	General	4,821	1,632
Durazzo	28	11:10	28	11:57	28	20:30	30	9:30	German.	Hamburg-American Line	227.5	34.4	13.0	Vancouver, B. C.	Cristobal, C. Z.	General	7,634	8,567
Andre Johnson ¹¹	28	10:35	28	14:04	28	20:35	29	0:00	Sweden.	Johnson Line	392.0	52.6	26.0	Vancouver, B. C.	Stockholm, Sweden	Lumber, general	5,574	6,650
Jugo Slavija	28	18:10	28	19:17	29	11:40	29	13:35	Yugoslav.	Babarizza & Co.	410.0	49.3	26.0	Antofagasta, Chile	Azores ¹²	Nitrate of soda	7,660	5,985
Willapio	28	18:30	28	19:37	29	10:45	29	10:45	American.	Williams S. S. Corp.	415.1	55.7	27.0	Seattle, Wash.	Baltimore, Md.	Lumber, g. nerul	10,350	7,731
Amenen ¹¹	28	6:30	29	6:15	29	13:35	29	20:30	British.	Anglo-Saxon Pet. Co.	407.0	54.0	27.0	Los Angeles, Calif.	Land's End, Eng. ¹²	Gasoline	8,036	6,045
San Salvador ¹¹	28	7:20	29	6:39	29	14:45	29	14:45	British.	Anglo-Mexican Pet. Co.	420.0	52.4	25.0	Los Angeles, Calif.	Lizards, Eng. ¹²	Gasoline	6,762	6,157
Kingsbury ¹¹	28	10:30	29	7:15	29	15:10	29	15:10	American.	Standard Oil Co. of Cal.	440.0	58.2	28.1	Los Angeles, Calif.	Paulsboro, N. J.	Gasoline	9,350	9,033

¹¹ Tanker. ¹² Chilled fruit and general.

⁹ Submarine. ¹⁰ Motor ship.

¹¹ Gunboat. ¹² For orders.

Pat Doheny ¹	28 19.50 29	7.37 29	16.05 29	16.05 American	Ritchfield Oil Co. of Cal.	430.0	59.2 28.0	Los Angeles, Calif.	Perth Amboy, N.J.	Gasoline	9,140 7,773 5,634
Poseidon	28 23.30 29	8.21 29	17.15 29	21.15 German	Hamburg-American Line	497.7	57.2 25.0	Pro. Montt, Chile	Hamburg, Germany	General	8,712 7,684 5,234
Mallard ¹⁴	29 8.30 29	16.00	American	U. S. Navy		187.0	35.6	Balboa, C. Z.	Cristobal, C. Z.	Ballast	
Themisto	29 5.30 29	8.41 29	17.20 29	17.20 Dutch	Hudig & Veder	400.5	55.0 25.0	Antofagasta, Chile	Azores ¹²	Nitrate of s-d.	7,850 6,622 4,404
Sumo! ¹⁵	29 8.25 29	9.13 29	17.50 American	Sun Oil Co.		480.6	66.0 29.0	Los Angeles, Calif.	Chester, Pa.	Gasoline	13,626 9,619 6,456
Caucia ¹⁶	29 15.40 29	16.50 29	23.25 30	19.05 Colombian	National Navigation Co.	107.0	22.9 9.0	Buenaventura, Col.	Cristobal, C. Z.		53 238 163

¹⁴ Tug. ¹⁵ Coffee, machinery, and gold.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Date.	Vessel.	* ARRIVALS.		Date.	Vessel.	* DEPARTURES.		For—
		Line.	From—			Line.		
November 23	Ulua	United Fruit Co.	Port Limon, Costa Rica.	November 23	No. 9085 ¹⁶	Pan American Airways.	San Salvador and waypts.	
November 23	Swiftscout.	Asiatic Petroleum Corp.	Curacao, W. I.	November 23	No. 9776 ¹⁶	Pan American Airways.	Miami via waypts.	
November 24	Calamares.	United Fruit Co.	New York via Habana.	November 23	Bolivar	United Fruit Co.	New York via Kingston.	
November 24	Darien C-35 ¹⁶	Seadair Airplane Co.	Barranquilla, Colombia.	November 23	Ulua	United Fruit Co.	New York via Habana.	
November 24	No. 9688 ¹⁶	Pan American Airways.	San Salvador and waypts.	November 24	Cristobal	Panama R. R. S. S. Line.	New York via Haiti.	
November 25	Simon Bolivar	Royal Neth. S. S. Co.	Hamburg via waypts.	November 24	Swiftscout	Asiatic Petroleum Co.	Curacao, D. W. I.	
November 25	Cuba.	French Line	Havre via waypts.	November 25	Simon Bolivar	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	
November 25	No. 945-M ¹⁴	Pan American-Grace Airways.	Talara via waypts.	November 25	Calamares	United Fruit Co.	Port Limon, Costa Rica.	
November 26	Zacapa.	New York via Kingston.	Hamburg via wayports.	November 26	No. 9088 ¹⁶	Spanish S. S. Line.	Barecelona and wayports.	
November 26	Magdalena.	Hamburg-American Line.	Hamburg via wayports.	November 26	No. 142-M ¹⁶	Pan American Airways.	San Salvador and waypts.	
November 26	No. 9635 ¹⁶	United Fruit Co.	New Orleans, La.	November 26	Magdalena	Hamburg-American Line.	Miami via wayports.	
November 27	Darien	Pan American Airways	San Salvador and waypts.	November 26	Iriona	Pan American Airways.	Port Limon, Costa Rica.	
November 27	No. 9137 ¹⁶	Pan American Airways	Liverpool via wayports.	November 27	Zacapa	United Fruit Co.	New York via wayports.	
November 28	Picairn N. C. 214-H ¹⁶	Richard Light	Kalamazoo via wayports.	November 27	No. 309-N ¹⁶	Pan American Airways.	Talara via wayports.	
November 28	Simon Bolivar	Standard Fruit & S. S. Co.	New Orleans and Habana.	November 27	No. 300-N	Pan American-Grace Airways.	La Guayra and waypts.	
November 28	Genesive Lykes	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	November 28	Darien C-35 ¹⁶	Seadair Airplane Co.	Barranquilla & Cartagena.	
November 29	Magdalena	H. Stevenson	Colon, Rep. of Panama.	November 28	Cuba	French Line	Havre via wayports.	
November 29	Iriona	A. Tagaropoulos	Manzanillo, Cuba.	November 28	Darien	Darian	Port Limon, Costa Rica.	
November 29	Inapaquina ¹⁷	United Fruit Co.	Port Limon, Costa Rica.	November 28	No. 9670 ¹⁶	Pan American Airways.	San Salvador and waypts.	
November 29	Annetia I. ¹⁷	A. Tagaropoulos	Colon, Rep. of Panama.	November 28	Ametpa	Standard Fruit & S. S. Co.	New Orleans and waypts.	
November 29	Barson	G. I. Bryan	Colon, Rep. of Panama.	November 29	Iriona	United Fruit Co.	Asterdam and waypts.	
November 29	No. 300-N ¹⁶	Pan American-Grace Airways	La Guayra via waypts.	November 29	Simon Bolivar	Royal Netherlands S. S. Co.	Bluefields, Nicaragua.	
November 29	No. 9776 ¹⁶	Pan American Airways	Talara via wayports.	November 29	Pearl Marie ¹⁸	Colombian S. S. Line	New York via waypts.	
November 29	No. 9638 ¹⁶	Pan American Airways	Miami via wayports.	November 29	Amalucma ¹⁷	United Fruit Co.	Colon, Rep. of Panama.	
November 29	No. 9638 ¹⁶	Pan American Airways	San Salvador and waypts.	November 29	Inapaquina ¹⁷	A. Tagaropoulos	Colon, Rep. of Panama.	

¹⁶ Air-mail carrier. ¹⁷ Motor boat. ¹⁸ Motor schooner.

PORT OF BALBOA.

November 15	Incalite ¹⁹	Imperial Oil Co., Ltd.	Callao, Peru.	November 27	Incalite ¹⁹	Imperial Oil Co., Ltd.	Talara, Peru.
November 17	Frost ¹⁹	West India Oil Co.	Talara, Peru.	November 27	Frost ¹⁹	West India Oil Co.	Talara, Peru.

¹⁹ Motor ship.

* Other than ships passing through the Canal.

(Continued on page 268, column 2.)

Commercial Traffic Through the Panama Canal During the Fiscal Year 1930, by Principal Trade Routes.

The commercial traffic through the Panama Canal during the fiscal year ended June 30, 1930, classified according to principal trade routes, and nationality of vessels in each trade route, together with the corresponding totals for the fiscal years 1926 to 1930, inclusive, is summarized in tables presented at the end of this comment. Eight major routes of trade contributed to the majority of the traffic, representing 86 per cent of the total transits, 89.3 per cent of the Panama Canal net tonnage, 89.1 per cent of the total tolls collected, and 91.2 per cent of the total cargo in transit.

The United States intercoastal trade was, as in past years, the largest trade route serving the Canal. In 1930, it made up 32.9 per cent of the total number of transits, 35.9 per cent of the total Panama Canal net tonnage, 36 per cent of the total tolls collected, and 35 per cent of the cargo carried. This trade showed an increase over the previous year of 155 transits (8.2 per cent) and 387,109 tons of cargo (3.8 per cent). Traffic engaged in this trade has shown increases from year to year since 1926, with the exception of 1929, when, owing to a curtailment in mineral oil shipments from California, traffic showed a small decline.

The trade between Europe and North America (United States and Canada), which has ranked for several years as the second largest trade through the Canal, showed a decline of 173 transits (14.5 per cent) in comparison with the fiscal year 1929, while the cargo tonnage carried over this route decreased 337,492 tons (5.6 per cent). Vessels of British registry, with 436 transits, predominated in this trade in 1930, while those flying the Norwegian flag were second with 162. Transits of British vessels decreased 217 (33.2 per cent) in the number of transits in comparison with 1929, while cargo fell off 611,780 tons (20.5 per cent) on account of a marked absence of tramp shipping which was prominent in 1929 in the grain-carrying trade. As is noted, the decline in cargo was relatively smaller than the number of transits which was due to the fact that the above-mentioned grain fleet transited one way in ballast. Vessels of Norwegian registry increased 44 (37 per cent) and 229,690 (36.9 per cent) in cargo tonnage carried. The larger part of the increase in this traffic was in oil tankers.

The third trade of importance through the Canal was that between the east coast of the United States and South America. A very slight gain was made in point of transits—687 in 1930, against 682 in 1929, a gain of 5—while the cargo tonnage was relatively greater, showing an increase of 141,753 tons (4.1 per cent). Vessels of United States registry, with 356, contributed over one-half of the vessels in this trade during 1930, and showed an increase of 39 (12.3 per cent). United States vessels also carried 96,029 more tons of cargo in 1930 than in 1929, a gain of 5.5 per cent. Vessels of British registry ranked second in this trade, with 188 transits, an increase of 7 (3.8 per cent) over 1929. Cargo tonnage carried in British vessels increased 48,892 tons (6.2 per cent) over 1929. These two nationalities made up about 80 per cent of the transits and 75 per cent of the cargo carried over this trade in 1930.

In the trade between Europe and South America, which is the fourth ranking route of trade served by the Canal, a decrease was made in 1930 of 87 (13.8 per cent) in the number of transits and 429,556

(13 per cent) in cargo tons. The decrease was caused principally by the decline of nitrate shipments. Vessels of British registry contributed 162 transits and carried 880,619 tons of cargo over this route in 1930, which was an increase of 11 transits (7.3 per cent) and 88,537 tons of cargo (11.2 per cent) in comparison with the fiscal year 1929. Vessels of German registry were the second in importance in this trade in 1930, and contributed 115 transits of vessels carrying 665,927 tons of cargo. Although showing only a decrease of 2 transits as compared with 1929, a relatively greater decline was noted in the cargo tonnage which decreased 44,846 tons (6.3 per cent). In 1930, the combined vessels of British and German registry made up 51.1 per cent of the transits and carried 53.9 per cent of the cargo over the trade between Europe and South America.

In the trade route between the United States and the Far East (including the Philippine Islands), there was an increase of 55 transits (14.4 per cent) and 262,417 tons of cargo (10.2 per cent). This route showed the greatest relative gain of any, but less actual increase than the United States intercoastal trade. Japanese vessels led in the United States-Far East trade in numbers of ships, with 125 transits, carrying 830,961 tons of cargo. British vessels were next with 123 transits; they carried 737,272 tons. United States ships, making 117 transits, carried 857,026 tons of cargo. Ships of the 3 nations accounted for almost 83.5 per cent of the total transits in this trade in 1930, and carried 85.4 per cent of the total cargo over this trade. In comparison with 1929, transits of vessels of British registry increased 27 (28.1 per cent) in number of transits and 108,531 (17.3 per cent) in tons of cargo, while those of Japanese registry gained 18 (16.8 per cent) in number of transits and 142,313 (20.7 per cent) in cargo tonnage. Vessels of the United States registry, while showing a gain of 7 transits (6.4 per cent), registered a loss in cargo tonnage of 4,157 tons (0.48 per cent). There is a marked preponderance of traffic in one direction over this trade—outbound—many of the vessels which go to the Far East through the Panama Canal returning homeward via Suez.

The trade between Cristobal and the west coast of South America, contributing 239 transits to Canal traffic in 1930, represented a comparatively small proportion of the net tonnage, tolls, and cargo carried, owing to the small size of the vessels engaged in the trade. Traffic in this trade decreased 31 transits (11.5 per cent) and 44,178 (34 per cent) in tons of cargo carried. German vessels, with 119, made up 49.8 per cent of the transits and carried 70.8 per cent of the cargo over this trade in 1930, while those of Colombian registry, ranking second, made up 31 per cent of the transits and carried 14.6 per cent of the cargo. In comparison with 1929, German shipping over this trade made an increase of 10.2 per cent in transits and carried 15.6 per cent more cargo, while Colombian shipping decreased 12.9 per cent in transits and carried 53.8 per cent less cargo.

Shipping over the trade between Europe and Australasia increased 30 transits (14.8 per cent) and carried 15,499 tons (1.3 per cent) more cargo than in the previous year. Vessels of British registry predominated in this trade, as in previous years, representing 86.2 per cent of the transits and carrying 92.6 per cent of the cargo. Vessels of this nationality increased 18 transits (9.9 per cent) in comparison with 1929, while there was a slight decrease in cargo tonnage carried—19,454 tons (1.7 per cent).

The trade between the United States and Australasia contributed 131 transits of vessels in 1930, carrying 601,946 tons of cargo, a decrease of 3 transits (2.2 per cent) and 64,464 tons of cargo (9.7 per cent). Vessels of British registry with 78 transits and carrying 378,876 tons of cargo, dominated the shipping over this trade, while those of the United States with 38 transits, carrying 137,383 tons of cargo, were second. These two nationalities made up 88.5 per cent of the total transits over this trade in 1930 and carried 85.8 per cent of the cargo. In comparison with 1929, British shipping decreased 18 transits (18.7 per cent), while cargo carried by vessels of this nationality decreased 113,158 tons (23 per cent). United States shipping showed a gain of 9 transits (31 per cent) and 9,418 in cargo tons (7.4 per cent). As is true in the trade between the United States and the Far East, the larger part of the traffic in the trade between the United States and Australasia is outward, many of the vessels returning homeward via Suez or some other route.

The amount of cargo shown in the tabulation below is the tonnage carried by vessels operating over the respective trade routes and in some cases includes cargo having other destinations:

Trade routes and nationality of vessels.	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal:				
United States.....	2,035	10,767,190	\$9,752,310.03	10,506,137
Total, fiscal year, 1930.....	2,035	10,767,190	9,752,310.03	10,506,137
Total, fiscal year, 1929.....	1,880	9,826,329	8,998,920.79	10,119,028
Total, fiscal year, 1928.....	1,929	10,061,147	9,195,651.48	10,067,392
Total, fiscal year, 1927.....	1,875	10,400,896	9,113,767.29	10,560,505
Total, fiscal year, 1926.....	1,819	9,549,082	8,763,553.40	10,069,604
Between Europe and west coast of North America (United States and Canada):				
Belgian.....	14	71,200	76,971.95	99,248
British.....	436	2,252,460	1,983,443.38	2,366,811
Danish.....	39	203,654	199,236.59	272,094
Danzig.....	8	48,182	43,554.27	45,447
Dutch.....	47	316,088	302,133.15	277,342
French.....	69	374,425	329,082.00	334,329
German.....	37	601,688	493,576.06	579,398
Italian.....	31	182,735	185,243.90	168,935
Japanese.....	6	27,073	31,774.05	45,239
Norwegian.....	162	802,941	697,594.08	851,338
Swedish.....	54	260,025	211,283.57	275,227
United States.....	57	341,449	301,528.34	387,830
Total, fiscal year, 1930.....	1,020	5,481,920	4,855,421.34	5,703,338
Total, fiscal year, 1929.....	1,193	6,076,046	5,345,492.68	6,040,830
Total, fiscal year, 1928.....	1,238	6,060,178	5,381,870.44	6,012,992
Total, fiscal year, 1927.....	820	4,236,947	3,899,511.81	4,481,200
Total, fiscal year, 1926.....	712	3,652,508	3,328,232.84	3,715,311
Between east coast of United States and west coast of South America:				
Belgian.....	1	6,211	4,471.92	.....
British.....	188	795,700	755,616.18	842,057
Chilean.....	34	146,405	138,103.75	100,231
Danish.....	14	48,344	44,221.23	64,165
Danzig.....	1	6,063	4,365.36	.....
German.....	10	27,833	25,696.58	26,831
Greek.....	8	34,616	29,221.25	61,683
Italian.....	1	4,849	5,312.50	8,126
Japanese.....	4	18,311	17,617.00	24,024
Norwegian.....	22	85,536	87,895.20	123,122
Panamanian.....	4	19,588	18,578.34	26,652
Peruvian.....	1	5,415	5,422.50	7,577
Swedish.....	41	178,056	157,728.49	427,347

Trade routes and nationality of vessels.	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
Between east coast of United States and west coast of South America—Continued:				
United States.....	356	1,540,112	\$1,385,430.64	1,850,399
Yugoslav.....	2	9,271	8,721.25	17,950
Total, fiscal year, 1930.....	687	2,926,310	2,688,407.19	3,580,164
Total, fiscal year, 1929.....	682	2,777,737	2,562,035.13	3,438,411
Total, fiscal year, 1928.....	645	2,673,125	2,480,511.54	3,218,478
Total, fiscal year, 1927.....	557	2,339,303	2,159,256.25	2,931,446
Total, fiscal year, 1926.....	565	2,457,184	2,279,163.19	3,240,076
Between Europe and west coast of South America:				
Argentine.....	1	3,816	2,747.52	.....
Belgian.....	3	15,795	16,007.50	22,567
British.....	162	933,041	901,909.25	880,619
Chilean.....	12	17,747	15,890.11	5,280
Danish.....	1	5,263	4,210.00	9,878
Danzig.....	25	151,361	139,272.43	134,087
Dutch.....	55	305,742	234,562.52	311,708
Finnish.....	2	3,810	4,572.00	5,450
French.....	40	174,014	172,112.70	177,003
German.....	115	565,296	515,769.49	665,927
Greek.....	14	54,605	48,642.50	98,536
Italian.....	33	237,519	190,759.49	83,162
Japanese.....	1	4,449	4,472.50	7,100
Norwegian.....	45	164,458	139,241.32	238,454
Spanish.....	1	4,209	4,572.50	8,250
Swedish.....	7	31,711	28,410.27	42,976
United States.....	1	5,667	5,490.00	10,072
Yugoslav.....	24	102,337	960,077.49	166,412
Total, fiscal year, 1930.....	542	2,780,890	2,524,719.59	2,867,541
Total, fiscal year, 1929.....	629	3,112,089	2,852,857.29	3,297,097
Total, fiscal year, 1928.....	573	2,713,299	2,575,672.66	2,905,465
Total, fiscal year, 1927.....	452	2,084,989	2,008,781.00	1,949,603
Total, fiscal year, 1926.....	485	2,199,857	2,145,543.51	2,395,740
Between east coast of the United States and Far East (including Philippine Islands):				
British.....	123	679,158	542,830.00	737,272
Danish.....	21	69,182	58,342.50	104,676
Japanese.....	125	624,174	650,267.80	830,961
Norwegian.....	44	231,619	170,988.75	274,586
Panamanian.....	6	41,862	29,921.25	25,339
Swedish.....	1	5,213	5,212.50	8,875
United States.....	117	629,457	601,668.00	857,026
Total, fiscal year, 1930.....	437	2,280,665	2,059,230.80	2,838,735
Total, fiscal year, 1929.....	382	1,940,066	1,788,620.99	2,576,318
Total, fiscal year, 1928.....	311	1,638,006	1,528,681.70	2,066,275
Total, fiscal year, 1927.....	311	1,628,894	1,528,867.06	1,983,464
Total, fiscal year, 1926.....	279	1,486,270	1,418,938.55	1,755,048
Between Cristobal and west coast of South America:				
British.....	1	622	460.50	.....
Colombian.....	74	13,026	15,371.33	12,543
Dutch.....	34	25,210	12,495.00	9,649
German.....	119	101,931	84,921.25	60,570
Norwegian.....	1	504	362.88	.....
Panamanian.....	1	124	141.25	75
Swedish.....	3	2,238	1,824.24	639
United States.....	6	7,593	5,760.25	2,142
Total, fiscal year, 1930.....	239	151,248	121,336.70	85,618
Total, fiscal year, 1929.....	270	224,611	173,312.84	129,796
Total, fiscal year, 1928.....	316	265,074	222,054.47	218,159
Total, fiscal year, 1927.....	169	140,957	112,130.60	92,937
Total, fiscal year, 1926.....	140	178,543	138,838.13	116,258

Trade routes and nationality of vessels.	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
Between Europe and Australasia:				
British.....	200	1,521,061	\$1,364,301.60	1,119,085
French.....	12	64,446	65,700.00	40,379
Norwegian.....	12	41,268	38,514.10	22,900
Swedish.....	8	41,487	31,516.10	26,063
Total, fiscal year, 1930.....	232	1,668,262	1,500,031.80	1,208,427
Total, fiscal year, 1929.....	202	1,510,340	1,389,756.04	1,192,928
Total, fiscal year, 1928.....	208	1,483,205	1,391,250.44	1,150,663
Total, fiscal year, 1927.....	183	1,296,957	1,242,577.14	1,033,217
Total, fiscal year, 1926.....	184	1,302,913	1,231,493.14	1,100,696
Between east coast of the United States and Australasia:				
British.....	78	450,822	393,425.15	378,876
Danzig.....	1	4,691	3,381.25	6,532
French.....	1	4,724	4,578.75	7,800
Norwegian.....	10	57,737	52,876.25	60,274
Swedish.....	3	11,203	10,112.66	11,081
United States.....	38	183,942	169,750.54	137,383
Total, fiscal year, 1930.....	131	713,119	634,124.60	601,946
Total, fiscal year, 1929.....	134	711,326	639,913.71	666,410
Total, fiscal year, 1928.....	131	686,707	629,793.65	638,810
Total, fiscal year, 1927.....	172	882,264	824,654.00	828,919
Total, fiscal year, 1926.....	167	822,625	777,503.64	760,493
Miscellaneous:				
British.....	348	1,374,098	1,255,993.27	1,248,149
German.....	36	136,326	116,249.78	55,296
Norwegian.....	75	276,038	222,658.23	237,604
United States.....	275	1,059,085	998,724.90	748,244
All other.....	128	365,463	347,681.78	349,033
Total, fiscal year, 1930.....	862	3,211,010	2,941,307.96	2,638,326
Total, fiscal year, 1929.....	1,041	3,659,250	3,376,467.44	3,202,188
Total, fiscal year, 1928.....	1,105	3,877,893	3,639,013.39	3,352,475
Total, fiscal year, 1927.....	936	3,216,608	3,339,284.96	3,886,924
Total, fiscal year, 1926.....	846	3,130,699	2,847,789.58	2,884,222
Grand total, fiscal year, 1930.....	6,185	29,980,614	27,076,890.01	30,030,232
Grand total, fiscal year, 1929.....	6,413	29,837,794	27,127,376.91	30,663,006
Grand total, fiscal year, 1928.....	6,456	29,458,634	26,944,499.77	29,630,709
Grand total, fiscal year, 1927.....	5,475	26,227,815	24,228,830.11	27,748,215
Grand total, fiscal year, 1926.....	5,197	24,774,591	22,931,055.98	26,037,448

Fruit Shipments from Pacific Northwest.

A heavy movement through the Panama Canal of fresh fruit from the Pacific Northwest is anticipated in the next two months. The Blue Star Line is reported to have added its fourth extra ship for a mid-December position; the three other additional vessels, the *Gothicstar*, *Napierstar*, and *Normanstar*, transited the Canal last month en route to the Pacific Northwest. The four extra vessels are expected to lift about 600,000 boxes of apples for European ports.

The North Pacific Coast Line (joint service of Holland-America Line and Royal Mail Steam Packet Company) is reported also to have added two extra fresh fruit carriers, which will lift apples for European ports, sailing from the west coast in December. This brings the total number of sailings of refrigerator ships offered by the latter line for the season from September to March up to 28.

Silk via the Panama Canal.

Bradstreet's of November 1, 1930, states that the traffic bureau of the Silk Association of America reports that the Panama Canal is becoming a more and more popular route for shipping silk cargoes from the Orient to the New York market. The report further states that in the first 9 months of the year a total of 106,556 bales of raw silk were routed via the Panama Canal as compared with 81,549 bales during the same period in the previous year. The article also states that raw silk shipments in 1929 via the Panama Canal were 116,496 bales as compared with 31,319 bales in 1928.

Statistics compiled by The Panama Canal indicate that in 1928 silk amounting to 3,319 tons was routed through the waterway; in 1929, 14,304 tons; and in the first 9 months of the current calendar year, 13,288 tons, which figures are in general agreement with those of the Silk Association. The Canal figures are for shipments to all ports on the Atlantic coast of the United States, but New York receives by far the greater part of this silk.

From the Panama Canal statistics it is indicated that the larger portion of the silk routed via the Canal has been transhipped at Pacific coast ports of the United States to fast intercoastal carriers. With the current development, however, of the Oaska Shosen Kaisha's new express service (an item concerning which appeared in THE PANAMA CANAL RECORD of August 13, 1930), indications point possibly to greater shipments direct from the Orient, especially in view of the fact that the new ships are equipped with specially constructed silk rooms.

New Mooring Basin in Balboa Harbor.

The Dredging Division recently started dredging on a new mooring basin in Balboa inner harbor. The new mooring area was deemed necessary in order to eliminate the anchoring of vessels in the channel opposite Balboa inner harbor, thus removing a dangerous condition to shipping; to eliminate expensive costs of maintenance dredging in the areas previously in use for mooring vessels in the channel; and to facilitate the maneuvering of vessels in and out of the harbor.

The new mooring basin is to be located to the north of the harbor, between the east prism line and the north harbor limit, in the area partly dredged last year for the Albroom Field fill. It is to be 800 feet long, 700 feet wide, and of a depth of 41.7 feet, mean low tide. The work is being carried on as a part of Project No. 1, which takes in the deepening of the Pacific entrance channel from Miraflores Locks to the sea buoys, and Balboa inner harbor, from 45 feet to a ruling depth of 50 feet, mean sea level.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 26, 1930.

No. 810.

Panama Bay, Perlas Islands, measured mile discontinued. The measured mile beacons on Pedro Ganzales Island as announced in Notice to Mariners, No. 773, Balboa Heights, October 6, 1930, have been found to be in error and should not be used. Notice No. 773 is accordingly canceled.

J. L. SCHLEY,
Acting Governor.

Revised Express Air Mail Schedule.

The express air mail schedule between the Canal Zone and Miami, which was printed in THE PANAMA CANAL RECORD for July 16, 1930, has been changed, effective with the departure from Cristobal on December 3d, to afford service between the Canal Zone and Jamaica, and faster service to Cuba and Miami. The flying time to Miami has been reduced by about four and one-half hours and the flying distance by about 100 miles. Heretofore the planes in this express service have flown from Cristobal to Puerto Cabezas, Nicaragua, where they remained over night. In the second day they flew direct to Habana and thence to Miami, arriving at Miami about 5 p. m. Under the new schedule they will leave Cristobal about three hours earlier and reach Miami about 10.45 a. m. the following day. The following schedule will be observed:

NORTHBOUND.

Sundays and Wednesdays.

Lv. Cristobal 6 a. m.
Ar. Kingston, Jamaica, 1.45 p. m.
Ar. Cienfuegos, Cuba, 5.15 p. m.

Mondays and Thursdays.

Lv. Cienfuegos, Cuba, 8.15 a. m.
Ar. Miami, Fla., 10.45 a. m.

SOUTHBOUND.

Tuesdays and Fridays.

Lv. Miami, Fla., 3 p. m.
Ar. Cienfuegos, Cuba, 5.15 p. m.

Wednesdays and Saturdays.

Lv. Cienfuegos, Cuba, 6 a. m.
Ar. Kingston, Jamaica, 10 a. m.
Ar. Cristobal, C. Z., 5.30 p. m.

On account of the early departure on Sundays and Wednesdays of the express planes leaving Cristobal, mail intended for dispatch by them will have to be deposited in Canal Zone post offices, except Cristobal, not later than one-half hour before the departure of the late afternoon train for Colon on the day preceding, that is, on Saturday or Tuesday. At the Cristobal post office dispatches close at 1 a. m., Sundays and Wednesdays.

There is no change in other services, including those to and from South America, except that Pan American Airways planes are making La Guaira, Venezuela, their terminal instead of Puerto Cabello.

The following is a summary of air mail schedules to and from Cristobal:

DISPATCHES.

- (a) *Express service to Miami*: Semiweekly, on Sundays and Wednesdays.
- (b) *Regular service to Miami*: Weekly, on Fridays.
- (c) *Regular service to Brownsville, via Central America*: Triweekly, on Sundays, Wednesdays, and Fridays.
- (d) *Regular service to Colombia (west coast), Ecuador, Peru, Chile, Argentine, and Uruguay*: Semiweekly, on Sundays and Thursdays.
- (e) *Regular service to Colombia (east coast), Curacao, and Venezuela*: Weekly on Thursdays.

ARRIVALS.

- (a) *Express service from Miami*: On Wednesdays and Saturdays.
- (b) *Regular service from Miami*: On Mondays and Saturdays.
- (c) *Regular service from Brownsville*: On Mondays, Wednesdays, and Saturdays.
- (d) *Regular service from South America (west coast)*: On Tuesdays and Saturdays.
- (e) *Regular service from South America (east coast)*: On Saturdays.

New Boundary Lines for Fare Zones in Panama City, Ancon, and Balboa.

New boundary lines for the fare zones in the Southern District, which includes Panama City, Balboa, and Ancon, have been outlined in an Executive Order approved by the Secretary of War on October 10, 1930, with the agreement of the authorities of Panama, and will go into effect January 1, 1931.

These zones are used as the base on which fares are charged for the transportation of passengers in public vehicles. The changes made do not greatly affect the former boundaries, the intention being to clarify the status of recent building developments.

The new order is a revision of Section 6, Schedule A, of the Executive Order of February 26, 1921, entitled "Regulations establishing maximum rates of fare and governing transportation of passengers for hire in the Canal Zone." The changes are as follows:

1st Panama City Fare Zone.—Does not include Gorgas Hospital Admitting Office which is within Ancon and Heights fare zones only.

Ancon Fare Zone.—Includes Admitting Office in Gorgas Hospital Administration Building.

Balboa Fare Zone.—Isthmian Airways hangar included in this zone; boundary line changed to include junction of Amador Road and Banyan Street.

La Boca Fare Zone.—Fortified Islands and causeway are specifically excluded from this zone.

2d Panama City Fare Zone.—New boundary outlined as follows: "The part of Caledonia District extending from the east of the Panama Railroad line as far as the Quinta Santa Isabel, the old Polvorin, the Sabanas Road as far as Bella Vista tramway station, and the suburbs of Vista del Mar and Peña Prieta, including the Exposition Grounds."

3d Panama City Fare Zone.—New boundary outlined as follows: "Bella Vista (old and new) as far as the Club Miramar on one side of the Sabanas Road and La Cresta as far as Tumbamuertos on the other side."

Following are the specified locations and fare zones:

Locations and fare zones.	Diablo.	Corozal.	Fort Clayton.	Filtration Plant and Locks, Miraflores.	Pedro Miguel.	Paraiso.	Kennelworth and Hippodrome.	Las Sabanas Police Station.	Golf Club.	Aviation Field, P. A. A. Airport.
1st Panama City							\$0.60	\$0.85	\$1.00	\$1.50
2d Panama City							0.30	0.60	0.85	1.35
3d Panama City							0.25	0.45	0.60	1.25
Ancon	\$0.40	\$0.75	\$1.00	\$1.50	\$2.00	\$2.25	0.60	0.85	1.00	1.50
Balboa										
Heights										
La Boca										
Kennelworth and Hippodrome	0.50	0.60	1.00	1.50	2.00	2.25	0.25	0.25	0.50	1.00
Las Sabanas Police Station	0.75	0.75	1.25	1.75	2.25	2.50	0.25	.....	0.25	1.00
Golf Club	1.00	1.00	1.50	2.50	2.50	2.75	0.50	0.25	.....	0.50
Aviation field, P. A. A. Airport	1.75	2.00	2.50	2.50	2.75	2.75	1.00	1.00	0.50	.....
Shriner's Mosque, Ancon	Add 10 cents, U. S. currency, to zone and location fares for each adult person carried to door of mosque on upper level.									

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division

Fire Aboard Freighter "Ludwigshafen."

The German freighter *Ludwigshafen* of the North German Lloyd, en route from Talcahuano, Chile, via wayports, to Hamburg, Germany, laden with nitrate and general cargo, arrived at Balboa on the morning of December 1, 1930, with fire in No. 5 hold. The fire was discovered in No. 5 hold at about 1.45 a. m. on November 30, when the ship was about 30 miles south of Punta Mala, Panama. Shortly afterward the hatch covers were blown off of holds 4 and 5 and the fire extended to the provisions storerooms in the after peak. The intense heat and poisonous fumes from the nitrate cargo made it impossible to combat the fire, and the master, fearing an explosion, sent out an S. O. S. call and ordered the crew from the ship. After standing by in small boats for several hours, during which time the fire had subsided somewhat, the crew returned to the vessel and succeeded in extinguishing the fire in No. 4 hold, and holding it in check in No. 5 hold. The ship proceeded slowly toward Balboa.

Ships approaching the area were requested to be ready to render assistance, and the Navy tug *Sciota* put out from Balboa. Early in the afternoon the North German Lloyd agency requested The Panama Canal to send a tug with large pumps, and the *Gorgona* was dispatched at 4 p. m., with firemen, whereupon the *Sciota* returned to Balboa. The *Gorgona* met the *Ludwigshafen* at a point about 70 miles from Balboa, at approximately 10 p. m.; two fire lines were carried aboard and in a short time the fire in lower No. 5 hold was extinguished and between decks cooled down. The fire in the after peak and between decks of No. 5 hold was not extinguished at the time as the master requested that no more water be put on the ship. The vessel then proceeded to port where, after about two hours work by local firemen, the fire was extinguished.

The cargo in Nos. 4 and 5 holds, and the ship's provisions stored in the after peak, are a total loss, while the vessel herself is badly damaged. Temporary repairs are being made at Balboa.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 21, 1930.

No. 805

Pacific Ocean, off west coast of Panama, Jicarita Island, light established. A new light was established to-day on the southerly portion of Jicarita Island:

Description: Pyramidical steel skeleton tower 50 feet high; painted white with day marks on two sides; focal plane 325 feet above mean high water. *Position:* Latitude 7° 11' 45" N., longitude 81° 47' 31" W.

Projection of location on chart of Jicarita Island is slightly in error but it will be corrected when the new Navy survey is completed.

Characteristics: Two separate apparatuses, flashing white, one and one-half seconds each in fifteen seconds. These flashes may occur simultaneously or successively, hence the interval between flashes may be irregular. *Visibility:* 18 miles through an open angle of 208° from 90° to 298° (from North). Contour of island obscures remainder of circle through North.

H. BURGESS,
Governor.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending November 30, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Caldas	National Navigation Co.	November 14	November 15	45	39
San Jose	United Fruit Co.	November 14	November 15	480	127
Kinai Maru	Osaka Shosen Kaisha	November 15	November 16	107	
Cuyama	U. S. Government	November 16	November 17	3,571	
Adalia	Hamburg-American Line	November 16	November 16	183	
Lobos	Pacific Steam Navigation Co.	November 17	November 17		50
Cambari	U. S. Government	November 18	November 18	167	17
Santa Elisa	Grace Line	November 18	November 18	38	130
Venezuela	Panama Mail S. S. Co.	November 18	November 19	137	7
Colombia	Panama Mail S. S. Co.	November 19	November 19	33	8
Abraham Lincoln	Fred Olsen & Co.	November 19	November 20	1,151	
Nosa King	N. O. & S. A. S. S. Co.	November 20	November 23		293
Saramacca	United Fruit Co.	November 20	November 21	87	9
Toba Maru	Nippon Yusen Kaisha	November 21	November 22	119	
City of San Francisco	Panama Mail S. S. Co.	November 22	November 22		3
Santa Maria	Grace Line	November 22	November 22	3	1
Spreewald	Hamburg-American Line	November 25	November 26	163	44
Santa Clara	Grace Line	November 26	November 26	30	
Amsterdam	Royal Netherlands S. S. Co.	November 26	November 26	113	
Tai Yang	Barber-Williamson Line	November 26	November 26	214	
Rangitata	New Zealand Shipping Co.	November 26	November 27	31	
Frost	West India Oil Co.	November 27	November 29	325	15
California	Panama-Pacific Line	November 28	November 28		168
San Mateo	United Fruit Co.	November 29	November 30	654	49
Mitra	Anglo-Saxon Petroleum Co.	November 30		7,329	

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1931 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	From New York to Cristobal.			From Cristobal to New York.		
	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
Cristobal	January 6	January 11	January 14	January 18	January 21	January 26
Ancon	January 20	January 25	January 28	February 1	February 4	February 9
Cristobal	February 3	February 8	February 11	February 16	February 19	February 24
Ancon	February 17	February 22	February 25	March 1	March 4	March 9
Cristobal	March 3	March 8	March 11	March 15	March 18	March 23
Ancon	March 17	March 22	March 25	March 29	April 1	April 6
Cristobal	March 31	April 5	April 8	April 12	April 15	April 20
Ancon	April 14	April 19	April 22	April 26	April 29	May 4
Cristobal	April 28	May 3	May 6	May 10	May 13	May 18
Ancon	May 12	May 17	May 20	May 24	May 27	June 1
Cristobal	May 26	May 31	June 3	June 7	June 10	June 15
Ancon	June 9	June 14	June 17	June 21	June 24	June 29
Cristobal	June 23	June 28	July 1	July 5	July 8	July 13
Ancon	July 8	July 13	July 16	July 19	July 22	July 27
Cristobal	July 21	July 26	July 29	August 2	August 5	August 10
Ancon	August 4	August 9	August 12	August 16	August 19	August 24
Cristobal	August 18	August 23	August 26	August 31	September 3	September 8
Ancon	September 1	September 6	September 9	September 13	September 16	September 21
Cristobal	September 15	September 20	September 23	September 27	September 30	October 5
Ancon	September 29	October 4	October 7	October 11	October 14	October 19
Cristobal	October 17	October 19	October 22	October 25	October 28	November 2
Ancon	October 27	November 1	November 4	November 8	November 11	November 16
Cristobal	November 10	November 15	November 18	November 22	November 25	November 30
Ancon	November 24	November 29	December 2	December 6	December 9	December 14
Cristobal	December 8	December 13	December 16	December 20	December 23	December 28
Ancon	December 22	December 27	December 30	January 3	January 6	January 11

¹ Effective April 28th, steamers sail daylight saving time.

² Due to discontinuance of the daylight saving time, departure of S. S. *Ancon*, September 29, will be at 4 p. m. standard time.

Steamers sail at 4 p. m. from Pier 65, North River, foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide the means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective, in the course of handling large traffic through the Canal in over 16 years of operation.

Tolls Charges for Transit of The Panama Canal.

- 1. Merchant vessels carrying passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity as determined by the Panama Canal Rules of Measurement \$1. 20
- 2. Vessels in ballast, without passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity as determined by the Panama Canal Rules of Measurement72
- 3. Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton50
- 4. Army and navy transports, colliers, hospital ships, and supply ships, the vessels to be measured by the same rules as are employed in determining the net tonnage of merchant vessels, per net ton 1.20
- 5. Tolls may not exceed the equivalent of \$1.25 per net registered ton as determined by United States rules of measurement, nor be less than the equivalent of \$0.75 per net registered ton so determined.
- 6. Vessels returning from Gatun Lake to original point of entry into the Canal, without passing through the locks at the other end, are charged tolls for one passage only.
- 7. Vessels transiting the Panama Canal from Cristobal to Balboa and return for the sole purpose of having repairs made at the Balboa dry dock and shops will be exempt from payment of tolls, but a charge will be made for pilotage in such cases, as provided in Paragraph 4, Item 3, of the tariff, and for handling lines in accordance with Item 4 of the tariff.

Hours of Departure of Passenger Trains.

Following are the hours of departure of the regular passenger trains of the Panama Railroad running between the Atlantic and the Pacific:

From Colon: Daily except Sunday, 7.00 a. m., 12.15 p. m., 4.30 p. m.; Sunday only, 9.20 a. m., 4.00 p. m.

From Panama: Daily except Sunday, 7.05 a. m., 12.20 p. m., 4.35 p. m.; Sunday only, 7.05 a. m., 6.15 p. m.

The time required for passage from one terminal to the other is 1 hour and 45 minutes.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 257.

PORT OF BALBOA.—Continued.

* ARRIVALS.		* DEPARTURES.	
Date.	Vessel.	Date.	Vessel.
November 29	San Mateo	November 30	San Mateo
November 29	Liria Elena	November 28	Liria Elena
November 28	Libertador	November 28	Libertador
November 28	Real	November 28	Real
November 28	Sambu	November 28	Sambu
November 28	Nueva Panama	November 29	Nueva Panama
November 25	Guardian		
	United Fruit Co.		United Fruit Co.
	A. Valdez		A. Valdez
	Hans Elliot		Hans Elliot
	Hans Elliot		Hans Elliot
	All-America Cables, Inc.		

* Other than ships passing through the Canal.

²⁰ Motor schooner. ²¹ Motor ship.

For—
San Francisco, Calif.
Panama Bay, R. P.
Panama Bay, R. P.
Panama Bay, R. P.
Panama Bay, R. P.
Panama Bay, R. P.

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., December 10, 1930. No. 19.

Overhaul of Gatun Locks.

Work on the quadrennial overhaul of the locks at Gatun is to be commenced on January 7, 1931, and will take about 90 to 100 days to complete. In addition to the routine overhaul, the program includes the removal, inspection, and repair of 4 pairs of miter gates, and the installation of 19 new cylindrical valves, which will complete the installation of the improved type valve began during the last overhaul of these locks in 1927. The feature of the new valves, which were manufactured by the Mechanical Division, is that the wearing surface can be removed when worn, thus avoiding the necessity of replacing the entire valves as in the old design.

As in the past, one side of the locks will be overhauled at a time, leaving the other side to take care of Canal traffic. A double operating shift for 16 hours and a single operating shift the remaining 8 hours will put vessels through Gatun Locks, while double chamber operation will be carried on at the Pacific Locks for 16 hours.

Supplement No. 1.—Tariff No. 10.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., December 2, 1930.

Item 22.—COAL.

(Effective December 2, 1930.)

	Cristobal-Colon.	Balboa.
4. For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 5.	\$7.25	\$10.25
5. For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.		7.25
6. For steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.	8.25	11.25
7. For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 6, per ton of 2,240 pounds.	10.25	13.25

J. L. SCHLEY,

Acting Governor, The Panama Canal,

2d Vice President, Panama Railroad Company.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, December, 6, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Tacoma	28	21.10	30	6.10	30	13.45	30	15.00	German	Hamburg-American Line	477.7	63.0	24.3	Hamburg, Germany	Portland, Oreg.	General, bananas	6,315	10,277	7,304
Salvador	30	14.45	30	6.10	30	13.52	30	15.05	British	Pacific Steam Nav. Co.	215.0	33.5	14.8	Cristobal, C. Z.	Champerico, Guat.	General	733	1,270	735
Banazates	28	16.35	30	6.10	30	13.58	30	15.05	German	Roland Line	216.5	32.9	13.0	Cristobal, C. Z.	Guayaquil, Ecuador	General	59	1,132	741
Buenaventura	28	17.40	30	7.30	30	14.32	30	15.35	American	Panama R. R. S. S. Line	251.0	43.0	19.1	New York, N. Y.	Guayaquil, Ecuador	General	1,018	2,873	1,776
Tudorcity	29	21.05	30	7.10	30	15.15	30	16.40	British	Blue Star Line	440.0	54.3	20.6	N. Shields, Eng.	Vancouver, B. C.	Ballast	7,624	5,574	5,574
Agaword	29	27.30	30	8.20	30	16.30	30	16.40	American	Richfield Oil Co.	429.3	59.2	20.0	New York, N. Y.	Los Angeles, Calif.	Ballast	9	1,620	1,615
Niraxad	28	20.00	30	9.30	30	16.49	30	18.10	German	Hamburg-American Line	227.6	34.0	13.7	Cristobal, C. Z.	Guayaquil, Ecuador	General	1,633	1,041	1,041
Netheroy	29	16.30	30	11.25	30	18.15	1	10.44	British	Royal Mail S. P. Co.	450.0	58.3	18.8	Rotterdam, Holland	Portland, Oreg.	General, bananas	1,390	5,874	6,558
Engeluet	30	12.10	30	12.20	30	19.46	30	23.45	American	Isthmian S. S. Lines	424.0	56.0	25.0	Baltimore, Md.	Tilatjap, Java	General	7,309	7,611	5,450
Sea Thrush	30	14.38	30	14.30	30	21.22	30	22.40	American	Shepard S. S. Co.	410.0	54.2	17.6	Boston, Mass.	Seattle, Wash.	General	4,143	6,625	4,841
Cuba	30	23.25	30	19.05	1	9.50	1	16.28	Colombian	National Navigation Co.	107.7	22.0	10.0	Cristobal, C. Z.	Buenaventura, Col.	General	250	238	163
Willboro	30	19.00	30	19.15	1	12.47	2	23.08	American	Williams S. S. Line	414.7	55.7	18.0	Baltimore, Md.	Seattle, Wash.	General	3,348	7,717	5,763
Buenos Aires	30	18.00	30	1.05	1	19.33	1	22.11	Swedish	Johnson Line	426.0	56.0	24.0	Norrkoping, Swed.	Vancouver, B. C.	General	7,701	7,591	5,661
Dunrobin	30	18.35	1	6.10	1	14.41	1	19.12	British	Andrew Weir & Co.	404.9	53.0	24.3	Tampico, Mexico	Adelaide, Australia	Asphalt	6,502	5,651	4,076
Castilian	1	2.00	1	7.15	1	16.18	1	17.30	British	Can. Nat. Steamships	400.3	52.2	21.0	Montreal, Canada	Brisbane, Australia	General	3,070	5,906	4,141
City of	1	7.50	1	8.05	1	17.19	1	22.25	British	Ellerman & Bucknall	459.3	57.0	23.0	New York, N. Y.	Brisbane, Australia	General	2,366	9,181	6,634
Canberra	1	10.00	1	10.10	1	17.45	1	19.15	American	Redwood Line	379.9	53.1	24.0	Lake Charles, La.	Tacoma, Wash.	Gen., sulphur	6,292	5,067	4,103
Delight	1	11.40	1	11.50	1	18.29	1	19.55	American	Munson, McCor'k Line	409.8	54.2	23.0	Baltimore, Md.	Tacoma, Wash.	General	4,391	6,831	4,989
Harpan	2	5.00	2	6.25	2	13.44	2	15.30	Japanese	Osaka Shosen Kaisha	460.0	61.6	22.6	New York, N. Y.	Hongkong, China.	Tobacco, general	3,254	9,407	6,777
Kranio Maru	2	7.15	2	7.15	2	15.07	2	16.05	American	Roosevelt S. S. Co., S. B.	469.0	56.0	22.0	New York, N. Y.	Saigon, China	Case oil, general	5,882	8,308	5,850
Guaragous	2	7.35	2	7.40	2	15.31	2	17.05	American	Tampa Intercoastal Co.	469.0	54.0	21.0	New Orleans, La.	Mamla, P. I.	General	2,227	7,486	5,852
Edgemoor	1	23.15	2	10.49	2	20.00	3	7.49	Colombian	Francoisco Lobato	150.0	27.2	13.0	Rio Hacha, Col.	Buenaventura, Col.	Salt	650	410	307
Flemons	1	16.35	2	12.05	2	18.41	3	17.30	American	Panama Mail S. S. Co.	380.6	48.7	21.0	New York, N. Y.	San Francisco, Cal.	Coffee, general	2,875	5,926	4,178
Encador	2	18.45	2	19.05	3	12.05	3	13.05	American	Luckenbech Line	448.0	60.0	21.9	Boston, Mass.	Seattle, Wash.	General	2,900	9,294	6,861
J. L.	2	10.65	3	5.55	3	13.05	3	13.05	American	U. S. Navy	210.0	40.0	40.0	Guantanamo, Cuba	Balboa, C. Z.	Ballast	563	7,632	6,998
Sacramento	2	10.65	3	5.55	3	13.05	3	13.05	American	U. S. Navy	210.0	40.0	40.0	Guantanamo, Cuba	Balboa, C. Z.	Ballast	563	7,632	6,998
Pacific	2	10.65	3	5.55	3	13.05	3	13.05	American	U. S. Navy	210.0	40.0	40.0	Guantanamo, Cuba	Balboa, C. Z.	Ballast	563	7,632	6,998
Exporte	2	00.55	3	6.07	3	13.26	3	14.40	British	Furness, Withy & Co.	445.0	60.1	19.3	Glasgow, Scotland	Vancouver, B. C.	General	3,430	7,657	5,346
Tokyo Maru	3	22.25	3	7.10	3	14.38	3	15.45	Japanese	Nippon Yusen Kaisha	435.0	58.0	19.0	New York, N. Y.	Kobe, Japan	General, steel	2,082	8,567	6,020
California	3	1.45	3	7.25	3	14.37	3	15.32	American	Amer.-Hawaiian Line	445.0	59.8	19.0	Boston, Mass.	Tacoma, Wash.	General	2,082	8,567	6,020
Japan Arrow	3	1.50	3	8.10	3	16.25	3	17.30	American	Standard Transp. Co.	463.3	62.7	20.0	New York, N. Y.	Los Angeles, Calif.	Ballast	10,084	7,383	7,383
Eleanor	3	5.25	3	10.00	3	17.17	3	21.15	American	Arrow Line	410.0	54.3	17.8	Baltimore, Md.	Seattle, Wash.	General	3,139	6,572	4,758

¹ Tanker. ² Motor ship. ³ Motor schooner. ⁴ Gunboat.

	3	16.45	3	17.10	4	12.30	4	13.50	American.	Luckenbach Line.	436.6	57.2	23.0	Houston, Tex.	Seattle, Wash.	General.	3,800	8,543	6,402
Julia	3	16.45	3	17.10	4	12.30	4	13.50	American.	Luckenbach Line.	436.6	57.2	23.0	Houston, Tex.	Seattle, Wash.	General.	3,800	8,543	6,402
Ciriceto 5	3	10.40	3	5.45	4	15.30	6	8.45	American.	Stand. Fruit & S. S. Co.	600.0	77.0	23.0	Cristobal, C. Z.	Gatun, C. Z.	Bullast.	8		8
Colorado 6	3	10.40	4	5.45	4	15.30	6	8.45	American.	U. S. Navy.	531.0	90.0	23.0	Hampton Rds., Va.	Los Angeles, Calif.	Bullast.	4,570	18,197	13,526
Rangitiki 2	3	17.50	4	7.15	4	15.49	4	16.50	British.	N. Z. Shipping Co.	480.6	66.0	26.0	New York, N. Y.	Wellington, N. Z.	Bullast.	9,734	6,349	
Tidewater C. O.	3	17.50	4	7.15	4	15.49	4	16.50	American.	Tidewater Oil Co.	480.6	66.0	26.0	New York, N. Y.	Los Angeles, Calif.	Bullast.	9,734	6,349	
Stillman 2	4	4.45	4	8.40	4	16.50	4	23.02	British.	International Pet. Co.	565.7	75.6	24.0	New York, N. Y.	Talara, Perù.	Bullast.	16,780	9,885	
Alda.	3	23.40	4	13.10	4	22.00	4	22.00	German.	North German Lloyd.	359.4	51.0	16.3	Hamburg, Germany	Valparaiso, Chile.	General.	1,296	4,791	3,392
Cape Horn 2	4	20.00	4	20.30	5	10.35	5	11.42	British.	Lytle Shipping Co.	425.0	56.0	16.0	Liverpool, England	Vancouver, B. C.	Bullast.	6,813	4,538	
Robin	4	18.55	5	6.00	5	13.47	5	15.10	American.	Isthmian S. S. Lines.	424.0	55.2	28.10	Baltimore, Md.	Vancouver, B. C.	Steel, general.	8,600	7,470	5,536
Goodfellow.	4	18.55	5	6.00	5	13.47	5	15.10	American.	Isthmian S. S. Lines.	424.0	55.2	28.10	Baltimore, Md.	Vancouver, B. C.	Steel, general.	8,600	7,470	5,536
Pacific	4	21.20	5	6.15	5	14.33	5	15.45	American.	Dimon S. S. Corp.	499.6	54.2	17.0	Philadelphia, Pa.	Tacoma, Wash.	General.	3,694	6,537	4,845
Redwood.	4	23.00	5	7.15	5	15.50	5	16.45	American.	Sun Oil Co.	480.6	60.0	21.0	Chester, Pa.	Los Angeles, Calif.	Bullast.	9,620	6,476	
Sun 2	5	2.40	5	7.30	5	14.57	6	16.00	British.	Kerr Line.	451.0	61.4	19.10	New York, N. Y.	Los Angeles, Calif.	General.	2,099	9,309	6,522
Silvervev 2	5	2.40	5	7.30	5	14.57	6	16.00	British.	Kerr Line.	451.0	61.4	19.10	New York, N. Y.	Los Angeles, Calif.	General.	2,099	9,309	6,522
Cyprus 7	5	2.30	5	9.05	5	16.05	6	6.20	American.	Col. D. C. Jacking.	227.0	34.1	13.0	Vera Cruz, Mexico.	Colombia, Ceylon.	Bullast.	1,101	558	
Reformar 2	5	2.30	5	9.05	5	16.48	5	18.05	British.	Blue Star Line.	420.0	54.0	18.0	N. Shields, Eng.	Guanajuato, Equador.	Bullast.	7,439	5,848	
Jefferson Myers	5	2.10	5	11.10	5	17.48	5	19.00	American.	Interoceanic S. S. Co.	449.0	56.0	16.6	London, England.	Vancouver, B. C.	General.	2,429	8,300	6,020
Orj Aleta 2	4	22.45	5	12.10	5	20.05	5	21.35	British.	Pacific Steam Nav. Co.	438.0	63.0	23.6	Liverpool, England	Vancouver, B. C.	General.	2,934	13,137	9,067
Eloy 2	5	18.40	5	13.00	5	20.35	6	3.02	British.	Imperial Oil Co.	438.0	57.2	22.0	New York, N. Y.	Talcahuano, Chile.	Bullast.	7,555	5,049	
Sutherland.	5	18.40	5	14.00	5	23.00	6	19.30	American.	All America Cables.	240.0	32.2	19.0	New York, N. Y.	Talcahuano, Chile.	Bullast.	7,555	5,049	
Relay 8	3	14.05	5	14.20	5	21.20	5	22.50	American.	All America Cables.	240.0	32.2	19.0	New York, N. Y.	Talcahuano, Chile.	Bullast.	7,555	5,049	
Sutherland.	4	10.20	6	6.08	6	13.28	6	14.30	Italian.	Nav. Generale Italiana.	380.0	53.2	18.8	Genoa, Italy.	Seattle, Wash.	Iron, steel, gen.	1,356	8,444	6,068
Capra.	4	10.20	6	6.08	6	13.28	6	14.30	Italian.	Nav. Generale Italiana.	380.0	53.2	18.8	Genoa, Italy.	Seattle, Wash.	Iron, steel, gen.	1,356	8,444	6,068
Queen Maud.	6	6.50	6	7.10	6	15.13	6	16.15	British.	DuPont de Nemours.	400.2	52.3	18.0	Baltimore, Md.	Talcahuano, Chile.	General.	1,902	5,748	3,955
Cities Service	6	8.55	6	9.10	6	15.45	6	17.00	American.	Richfield Oil Co.	430.0	59.2	18.0	Baltimore, Md.	Los Angeles, Calif.	Bullast.	8,093	5,347	
Oklahoma 1.	2	16.00	6	9.10	6	16.41	6	17.30	British.	Pacific Steam Nav. Co.	245.7	34.0	15.6	Baltimore, Md.	Los Angeles, Calif.	General.	588	1,273	706
Acajuba.	5	14.00	6	9.20	6	16.31	6	17.30	American.	United Fruit Co.	337.0	41.9	17.0	Cristobal, C. Z.	Champerico, Guat.	Bullast.	3,667	2,329	
Suriname.	5	18.50	6	10.05	6	17.10	6	21.15	American.	Grace Line.	370.0	53.2	21.6	New York, N. Y.	San Francisco, Cal.	General.	2,184	6,255	4,016
Santa Inez 2	6	9.45	6	10.25	6	19.45	6	21.15	British.	Grace Line.	370.0	53.2	21.6	New York, N. Y.	San Francisco, Cal.	General.	2,184	6,255	4,016
San Zeferino 1.	6	9.45	6	10.25	6	19.45	6	21.15	British.	Grace Line.	370.0	53.2	21.6	New York, N. Y.	San Francisco, Cal.	General.	2,184	6,255	4,016
Point Montara.	6	12.10	6	12.25	6	19.50	6	21.15	American.	Gulf-Pacific Line.	324.0	46.2	23.0	Tampa, Fla.	Valparaiso, Chile.	Fuel oil, grease.	8,349	6,636	4,408
Arina.	6	00.10	6	14.10	6	21.35	6	22.59	British.	Gulf-Pacific Line.	324.0	46.2	23.0	Tampa, Fla.	Valparaiso, Chile.	General.	3,200	3,984	2,612
La Plata	6	00.10	6	14.10	6	21.35	6	22.59	British.	Pacific Steam Nav. Co.	303.0	43.0	16.2	New York, N. Y.	Tocopilla, Chile.	General.	675	2,851	1,776
Maru 2.	6	16.50	6	18.25	7	9.40	7	10.38	Japanese.	Osaka Shosen Kaisha.	430.0	56.0	23.0	Buenos Aires, Arg.	Kobe, Japan.	General.	3,212	7,875	5,821
Canadian	6	18.45	6	20.10	7	11.44	7	13.05	British.	Can. Nat. Steamships.	400.0	52.0	18.6	Montreal, Canada.	Vancouver, B. C.	General.	3,600	5,891	4,186
Importer.	6	18.45	6	20.10	7	11.44	7	13.05	British.	Can. Nat. Steamships.	400.0	52.0	18.6	Montreal, Canada.	Vancouver, B. C.	General.	3,600	5,891	4,186

	5	19.45	30	6.35	30	15.30	30	17.35	American.	Quaker Line.	401.5	54.2	24.0	Portland, Oreg.	Philadelphia Pa.	General.	6,100	6,755	4,873
San Bernardino.	29	19.45	30	6.35	30	15.30	30	17.35	American.	Quaker Line.	401.5	54.2	24.0	Portland, Oreg.	Philadelphia Pa.	General.	6,100	6,755	4,873
Colombo.	30	3.10	30	7.29	30	14.30	14	14.05	Italian.	Italian Line.	518.0	64.0	24.0	Valparaiso, Chile.	Genoa, Italy.	General.	3,287	12,553	7,516
Canadian	29	20.55	30	8.25	30	16.50	30	19.45	British.	Can. Nat. Steamships.	400.0	52.4	12.0	Auckland, N. Z.	Halifax, N. S.	General.	970	6,192	4,402
Highlander.	30	10.00	30	10.45	30	18.30	30	21.55	British.	J. & C. Harrison.	400.9	56.0	29.0	Salaverry, Peru.	Marseilles, France.	General.	7,537	5,885	4,179
Harpenden.	30	3.00	30	7.11	30	16.00	30	16.00	American.	Handley S. S. Co.	440.0	54.0	29.0	Longview, Wash.	Newark, N. J.	Lumber.	9,300	8,310	6,005
Hanley.	1	7.55	1	8.47	1	16.25	1	16.35	British.	Dale & Co.	425.9	57.0	27.0	Vancouver, B. C.	Rotterdam, Holland.	Wheat.	9,230	6,888	4,961
Rajahast.	1	8.10	1	9.13	1	17.20	1	21.34	American.	Dimon S. S. Corp.	399.4	54.7	26.0	Seattle, Wash.	New York, N. Y.	Lumber, general.	7,600	6,138	4,353
Pacific Cedar.	1	8.10	1	9.13	1	17.20	1	21.34	American.	Dimon S. S. Corp.	399.4	54.7	26.0	Seattle, Wash.	New York, N. Y.	Lumber, general.	7,600	6,138	4,353
Drigo 1.	1	9.00	1	9.48	1	17.35	1	17.35	American.	The Texas Co.	416.8	56.1	26.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline.	8,471	6,931	5,009

5 Cable ship. 9 Towing barge from Gatun.
THROUGH THE CANAL—PACIFIC TO ATLANTIC.

7 Yacht. 8 Battleship. 9 Launch.

1 Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Tremeadow	1	8:40	1	10:08	1	18:35	1	20:30	British	Hain S. S. Co.	400.1	52.2	24.3	Aitofagasta, Chile.	Azores ¹ .	Nitrates.	7,500	5,797	4,090
Brigale	1	8:25	1	10:42	1	19:10	1	19:10	American	Charles Nelson & Co.	324.0	46.2	23.0	Bellingham, Wash.	Philadelphia, Pa.	Lumber, general.	4,117	3,985	2,680
Prince Albert	28	6:00	1	11:37	1	19:00	1	19:00	British	Atlantic Pacific Nav. Co.	332.0	30.0	15.0	Vancouver, B. C.	St. Pierre, France.	Spirits	525	1,076	567
Manassas	1	9:45	1	12:11	1	20:05	1	20:05	American	Munson, McCork & Line.	400.7	34.2	27.0	Pr. Townsend	Philadelphia, Pa.	Lumber, general.	7,066	6,623	4,668
Counsell	1	10:00	1	14:05	2	9:10	2	9:10	British	T. & J. Harrison.	395.5	52.5	24.0	Vancouver, B. C.	Liverpool, England.	General	6,391	5,753	3,857
Bretwald	1	10:03	1	13:01	2	22:30	00:30	00:30	British	Grace & Co.	400.0	52.4	25.0	Chimboe, Peru.	Marseilles, France.	Brown sugar.	7,219	5,758	4,067
Carton	1	13:00	1	18:38	2	12:50	2	14:00	British	R. Chapman & Son.	390.0	53.5	25.0	Vancouver, B. C.	London, England.	Lumber, general.	8,041	6,612	4,119
Penelope	1	17:00	2	6:10	2	15:00	2	16:00	Danzig	W. Tinkerschell Rheiderl.	470.1	63.2	27.2	Talara, Peru.	Rotterdam, Holl'd.	Gasoline.	11,236	9,302	6,127
Sutaria	1	20:30	2	6:35	2	14:00	2	15:10	American	Donaldson Line	425.0	56.0	27.1	Vancouver, B. C.	Glasgow, Scotland.	General	7,780	7,827	5,429
Guayaquil	1	21:32	2	7:09	2	16:00	2	16:00	British	Panama R. R. S. S. Line	251.0	43.6	19.2	Guayquil, Ecuador	New York, N. Y.	General	1,739	2,874	1,944
Acaguila	1	6:10	2	7:20	2	16:00	2	16:00	British	Pacific Steam Nav. Co.	215.7	33.6	12.4	Champertou, Guat	Cristobal, C. Z.	General	210	1,273	705
Manishon City	1	21:45	2	7:51	2	16:25	2	16:25	American	Isthmian S. S. Lines	424.2	56.2	27.0	Vancouver, B. C.	Dublin, Ireland.	Lumber, general.	7,846	7,611	5,450
Ranger	2	2:45	2	8:30	2	17:20	2	20:08	British	Furness, Withy & Co.	436.4	60.3	27.0	Vancouver, B. C.	London, England.	General	8,275	9,725	6,942
Montanan	2	9:00	2	10:09	2	17:35	2	17:35	American	Amer.-Hawaiian Line	404.6	53.9	26.3	Portland, Oreg.	Boston, Mass.	General	6,330	6,756	4,775
Herman F.	2	9:30	2	10:31	2	18:10	2	18:10	American	A. C. Dutton Co.	409.8	54.2	24.3	Everett, Wash.	New York, N. Y.	Lumber	7,000	6,581	4,784
Whiton	2	10:34	2	10:54	2	19:40	3	20:18	British	Blue Star Line	450.0	58.5	25.0	Vancouver, B. C.	Newcastle, Eng.	Apples, general.	4,234	8,240	5,395
Tacoma Star	2	10:30	2	11:56	2	20:40	3	2:30	British	Empire Shipping Co.	421.2	54.2	25.0	Vancouver, B. C.	Hampton Rds.	Wheat	8,200	6,265	4,570
Haxby	1	9:40	2	13:36	2	21:30	2	21:30	American	U. S. Navy	461.6	60.0	30.0	Los Angeles, Calif	Hampton Rds.	Fuel oil, gen.	10,610		
Lewis	1	12:20	2	14:47	2	22:35	2	22:35	American	Lukenbach Line.	496.0	68.2	27.0	Portland, Oreg.	Boston, Mass.	Lumber, general.	9,398	7,382	5,663
Chile	1	16:30	2	17:35	3	13:59	3	14:30	Danish	East Asiatic Co.	425.3	55.2	25.2	Vancouver, B. C.	Copenhagen, Den.	General	9,482	11,487	8,762
Guatemala	1	14:25	3	6:32	3	13:15	3	13:15	American	Panama Mail S. S. Co.	360.2	51.6	24.3	San Francisco, Cal.	New York, N. Y.	General	2,627	5,776	4,051
Sanyo Maru	1	10:45	3	6:41	3	14:20	3	21:55	Japanese	Osaka Shosen Kaisha	446.0	60.5	22.3	Kongkong, China.	New York, N. Y.	General	2,814		
San Pedro	1	19:00	3	7:14	3	15:05	3	15:05	American	States S. S. Co.	395.0	55.0	27.0	N. W. estm' cr. B. C.	London, England.	Lumber, general.	6,977	7,330	5,233
Nevala	2	24:35	3	7:58	3	16:00	4	4:25	French	French Line	419.0	54.0	26.0	Portland, Oreg.	Le Havre, France.	Wheat	6,377	7,500	5,196
Brazil Maru	3	7:10	3	8:39	3	16:15	3	16:15	Japanese	Kokusa Kisen Kaisha.	385.0	51.0	26.0	Vancouver, B. C.	Gibraltar ¹ .	Wheat	7,667	9,915	4,423
Atlas	3	10:15	3	13:42	3	21:15	3	23:10	American	Standard Transp. Co.	468.3	62.7	28.4	Los Angeles, Calif	New York, N. Y.	Gas oil	10,631	7,348	4,164
Empire Arrow	3	16:30	3	10:45	4	00:15	4	22:00	American	Standard Oil Co., N. Y.	468.3	61.1	25.3	Vancouver, B. C.	New York, N. Y.	Gas oil	12,511	9,841	6,946
Seaside	3	15:30	3	10:45	4	00:15	4	22:00	American	Hamburg-American Line	410.0	61.1	25.3	Vancouver, B. C.	Hamburg, Germany	General	7,721	9,267	6,854
Mississippi	3	16:30	3	17:22	4	13:55	4	15:55	French	French Line	561.0	72.0	33.5	Corral, Chile	New York, N. Y.	Nitrate, copper.	7,296	7,156	4,984
Amerikland	3	22:30	4	6:08	4	15:55	4	16:55	Swedish	Ore S. S. Corp.	370.0	51.7	24.0	Corral, Chile	New York, N. Y.	Iron ore.	21,650	15,560	4,196
Apple Branch	3	17:30	4	7:16	4	18:35	4	18:35	British	F. & W. Kitson	378.0	53.3	24.0	Antofagasta, Chile.	Liverpool, England	General	5,822	5,112	3,511
Leged	3	21:25	4	8:30	4	20:25	4	20:25	Yugoslav	Anglo-Chile Nitrate Co.	440.6	56.2	26.4	Talcahuano, Chile	Azores ¹ .	Nitrate of soda.	7,118	5,236	3,987
Cornwallis	3	21:25	4	8:30	4	18:45	4	19:45	German	Roland Line	440.6	56.2	26.4	Los Angeles, Calif	Hamburg, Germany	Nitrates, gen.	7,988	7,051	4,770
Witch	3	23:30	4	8:50	4	20:25	5	3:25	German	North German Lloyd	469.8	58.2	24.0	Los Angeles, Calif	Hamburg, Germany	General	7,322	7,816	5,795
Handicap	4	4:00	4	9:29	4	21:40	4	21:40	Norwegian.	Strange & Co.	415.3	54.7	25.0	Vancouver, B. C.	Bridgeport, Conn.	Lumber	7,750	7,296	5,445

¹ Motor ship.

Villager ¹⁰	3 18.00	4 11.42	4 21.45	4 21.45	Norwegian.....	Westfall, Larsen & Co. 398.0	54.7	25.0	Vancouver, B. C. 398.0	Buenos Aires, Arg. 3,503	6,869	5,131
Surtiname.....	4 14.00	5 6.20	5 14.00	6 9.20	American.....	United Fruit Co. 335.7	41.9	19.0	San Francisco, Cal. 335.7	Cristobal, C. Z. 695	3,667	2,329
Gen. Wm. M. Graham ¹²	5 9.40	5 10.14	5 13.50	5 13.50	American.....	U. S. Army 160.2	32.0	32.0	Balboa, C. Z. 160.2	Cristobal, C. Z. 6,631	7,380	5,339
Alaskan.....	5 11.45	5 12.17	5 20.00	5 20.00	American.....	Amer.-Hawaiian Line 45.0	53.7	28.4	Seattle, Wash. 45.0	Boston, Mass. 632	1,182	742
Barb.	5 13.00	5 13.39	5 21.35	5 21.35	Dutch.....	Royal Neth. S. S. Co. 292.9	33.1	13.0	Buenaventura, Col. 292.9	Cristobal, C. Z. 576	1,572	1,011
Cerigo.....	6 3.30	6 6.45	6 14.55	6 21.05	German.....	Hamburg-American Line 303.4	43.0	20.0	Tocopilla, Chile. (13)	General (13)	3,246	2,826
Almagro.....	6 10.30	6 13.21	6 19.55	7 2.08	British.....	Pacific Steam Nav. Co. 480.0	64.0	24.0	Valparaiso, Chile. (14)	New York, N. Y. 3,471	10,637	6,653
Santa.....	6 15.45	6 16.30	7 12.10	7 13.20	American.....	Lloyd Royal Belge. 400.0	52.2	23.0	Yanconver, B. C. 400.0	General (14)	6,900	5,740
Barbara ¹⁰	6 18.00	6 19.13	7 12.00	7 13.45	Belgian.....	J. N. C. Harrison. 395.0	54.0	24.0	Iquique, Chile. (15)	Antwerp, Belgium 7,300	7,300	
Suever.....					British.....							
Harpalyce.....												

¹¹ Tanker. ¹² Mine planter. ¹³ Nitrates and copper ore. ¹⁴ Copper, nitrates, and general. ¹⁵ Other than ships passing through the Canal.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Date.	* ARRIVALS.		* DEPARTURES.		Line.	Vessel.	Date.	Vessel.	Line.	For—
	Vessel.	Line.	Vessel.	Line.						
November 20.....	Catara.....	Elders & Pyfies Line	Avonmouth and wayp'ts.	Pan. American-Grace Airways	Talara via wayp'ts.					
November 30.....	Calamares.....	United Fruit Co.	Port Limon, Costa Rica.	H. Stevenson.....	Genfuegos, Cuba.					
November 30.....	Darien.....	Leyland S. Line.	Port Limon, Costa Rica.	Pan American Airways.....	San Salvador and wayp'ts.					
December 1.....	Telara C-35 ¹⁵	Santa Rita Co.	Baranguilla and wayp'ts.	Pan American Airways.....	Miami via wayp'ts.					
December 1.....	Telara ¹⁶	United Fruit Co.	Colon, Rep. of Habana.	United Fruit Co.....	New York via Habana.					
December 1.....	Lolita ¹⁶	Artime Martinez.	Talara via Habana.	Elders & Pyfies Line.....	Avonmouth via wayp'ts.					
December 2.....	Aneon.....	Pan American-Grace Airways	Talara via wayp'ts.	Hamburgers.....	Hamburg via wayp'ts.					
December 3.....	Telara.....	Panama R. R. S. S. Line.	New York via Haiti.	Leyland S. American Line.....	Liverpool and wayp'ts.					
December 3.....	Telara.....	United Fruit Co.	New Orleans, La.	Pan American Airways.....	San Salvador and wayp'ts.					
December 3.....	No. 9655 ¹⁵	Pan American Airways	San Salvador and wayp'ts.	United Fruit Co.....	Miami via wayp'ts.					
December 3.....	No. 668 ¹⁵	Pan American Airways	Miami via Cuba & Jam.	United Fruit Co.....	Port Limon, Costa Rica.					
December 4.....	Fidelio.....	Aluminum Line	New Orleans and wayp'ts.	Pan American-Grace Airways.....	Talara via wayp'ts.					
December 4.....	Davision.....	Leyland S. S. Line	Liverpool via wayp'ts.	Pan American Airways.....	La Guayra and wayp'ts.					
December 4.....	Swiftsure.....	Shell Oil Co.	Cruceao, D. W. I.	United Fruit Co.....	New York via wayp'ts.					
December 5.....	Cefalu.....	Standard Fruit & S. S. Co.	Colombian S. S. Line	United Fruit Co.....	Boaca, Rep. of Panama.					
December 5.....	Bogota.....	United Fruit Co.	New York via wayp'ts.	Aluminum Line.....	San Salvador and wayp'ts.					
December 5.....	Tela.....	Pan American-Grace Airways	Talara via wayp'ts.	Shell Oil Co.....	Port Limon, Costa Rica.					
December 6.....	No. 300-N ¹⁵	Pan American Airways	Boaca, Rep. of Panama.	Leyland S. S. Line.....	Cruceao, D. W. I.					
December 6.....	No. 669-M ¹⁵	Pan American Airways	Miami via wayp'ts.	Swiftsure.....	Baranguilla and wayp'ts.					
December 6.....	No. 9638 ¹⁵	Pan American Airways	San Salvador and wayp'ts.	Darien C-35 ¹⁵	Colon, Rep. of Panama.					
December 6.....	No. 145-M ¹⁵	Pan American Airways	La Guayra via wayp'ts.	Anneta I. ¹⁷	New Orleans and wayp'ts.					
December 6.....				Tela.....	New Orleans and wayp'ts.					
December 6.....				Cefalu.....	Standard Fruit & S. S. Co.					
December 6.....				Dora K. ¹⁸	A. L. Surgeon.....					
December 6.....				Bogota.....	Colombian S. S. Line.....					

¹⁵ Air mail carrier. ¹⁶ Motor schooner. ¹⁷ Motor boat. ¹⁸ Motor ship.

PORT OF BALBOA.

December 2.....	Real ¹⁶	Hans Elliot.	Panama Bay, R. P.	December 2.....	Real ¹⁶	Hans Elliot.	Panama Bay, R. P.
December 3.....	Sambu ¹⁶	Hans Elliot.	Panama Bay, R. P.	December 3.....	Sambu ¹⁶	Hans Elliot.	Panama Bay, R. P.
December 4.....	Real ¹⁶	Hans Elliot.	Panama Bay, R. P.	December 4.....	Real ¹⁶	Hans Elliot.	Panama Bay, R. P.

Tanker Traffic Through the Panama Canal in November, 1930.

During the month of November, 1930, 83 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 457,395, on which tolls of \$402,694.62 were paid. Cargo amounted to 441,841 tons, which included 421,736 tons of mineral oils, 4,102 tons of creosote, and 16,003 tons of molasses.

In point of net tonnage, tanker traffic decreased 19.1 per cent as compared with the tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 13.4 per cent.

Tank vessels comprised 17.3 per cent of the total commercial transits through the Canal during the month; made up 19.3 per cent of the total Panama Canal net tonnage; were the source of 19.2 per cent of the tolls collected; and carried 19.5 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of November, 1930, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for November, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	6	30,232	\$21,767.04	.....
Danzig.....	1	6,127	4,411.44	.....
Dutch.....	1	4,108	4,317.50	7,329
German.....	1	4,435	3,193.20	.....
Norwegian.....	6	31,855	24,563.93	4,178
United States.....	25	142,137	106,134.91	6,847
Total, November, 1930.....	40	218,894	164,388.02	18,354
Total, October, 1930.....	44	252,093	187,263.13	25,495
Total, September, 1930.....	50	283,237	209,912.77	15,241
Total, November, 1929.....	50	287,030	211,216.53	19,537
<i>Pacific to Atlantic.</i>				
British.....	7	33,388	36,184.10	60,945
Danish.....	2	9,792	10,103.75	18,376
Danzig.....	1	6,310	6,682.50	11,324
Norwegian.....	3	16,115	17,041.25	31,150
United States.....	30	172,896	168,295.00	301,692
Total, November, 1930.....	43	238,501	238,306.60	423,487
Total, October, 1930.....	49	278,943	279,266.88	467,651
Total, September, 1930.....	44	249,972	257,429.74	450,023
Total, November, 1929.....	52	278,572	283,466.37	490,815

¹ Creosote.

² Includes 16,003 tons molasses.

The following tabulation shows the tanker traffic through the Canal during November, 1930, classified according to trade routes:

ATLANTIC TO PACIFIC.

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	27	153,889	\$113,880.43	2,745
United States to South America.....	2	7,652	5,509.44	.....
United States to Balboa.....	1	4,336	4,786.25	4,178
Canada to South America.....	1	7,711	5,551.92	.....
West Indies to United States.....	1	4,108	4,317.50	7,329
Europe to United States.....	7	35,021	25,931.04	4,102
Europe to South America.....	1	6,127	4,411.44	.....

³ Creosote.

PACIFIC TO ATLANTIC.

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	27	155,738	\$151,856.25	270,324
United States to West Indies.....	3	16,023	17,197.50	30,749
United States to Europe.....	7	36,528	38,701.60	65,387
South America to United States.....	2	7,652	8,223.75	13,840
South America to Canada.....	1	7,711	7,988.75	15,860
South America to Europe.....	1	6,310	6,682.50	11,324
Hawaii to United States.....	2	8,539	7,656.25	16,003

* Molasses.

Of the tanker traffic passing through the Canal in November, 1930, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for November, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
November, 1930.....	33	181,068	\$133,889.22	12,576
October, 1930.....	33	192,300	138,456.00	30,749
September, 1930.....	36	210,397	152,995.07	7,909
November, 1929.....	42	245,284	177,967.21	2,335
<i>Pacific to Atlantic.</i>				
November, 1930.....	35	196,698	195,454.10	345,084
October, 1930.....	34	198,336	193,930.29	328,365
September, 1930.....	29	166,508	169,483.10	300,859
November, 1929.....	41	221,317	221,858.27	381,328

Bank Line's Building Program.

According to press reports the new cargo motor ship *Tweedbank*, eighth vessel in a building program of 10 ships constructed for Andrew Weir & Company, recently underwent successful trials. The new vessel was built in Belfast and is of the shelter deck type, 440 feet long, 57 feet beam, and of 5,628 gross tons.

Of the 10 vessels, 4 are steamers and 6 motor ships. The steamers have been completed and are the *Deebank*, *Forthbank*, *Lindenbank* and *Trentbank*. The motor ships are the *Irisbank*, *Taybank*, *Lossiebank*, *Tweedbank*, *Foylebank*, and *Nithbank*, and all except the *Nithbank* are reported completed. The *Foylebank* is due to pass through the Canal during December.

The Bank Line operates from the Atlantic ports of the United States to Far Eastern ports, via the Panama Canal, and return to the Atlantic coast via Suez. It also operates a service with irregular sailings between the Atlantic coast of the United States and Australasia.

Comparison of Canal Traffic in November, 1930, with November Traffic in Previous Years.

The commercial traffic through the Panama Canal during November, 1930, showed a decrease as compared with the previous month, and also decreases in comparison with November in 1927, 1928, and 1929.

In comparison with November, 1929, the 479 transits in November, 1930, are fewer by 46, or 8.8 per cent, than the 525 transits in November of last year, while the net tonnage (Panama Canal measurement), aggregating 2,371,487, was less by 127,419 tons, or 5.1 per cent, than

the total of 2,498,906 tons in November, 1929. The cargo tonnage of 2,263,200 for November, 1930, shows a decline of 271,431 tons, or 10.7 per cent, from the total of 2,534,631 tons passing through the Canal in November, 1929.

In the tabulation below are shown the number of transits, net tonnage (Panama Canal measurement), and the tons of cargo carried through the Canal during the month of November each year from 1914 to 1930, inclusive, and for comparison, the monthly averages for the corresponding fiscal year ending on June 30th following:

Calendar year.	Month of November.			Fiscal year.	Average per month for fiscal year.		
	Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.		Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.
1914.....	* 89	312,805	446,773	1915.....	* 102	361,197	465,567
1915.....	(¹)			1916.....	63	199,687	257,843
1916.....	147	436,058	512,826	1917.....	150	483,213	588,213
1917.....	183	586,519	696,328	1918.....	172	547,839	627,669
1918.....	182	510,533	626,728	1919.....	169	510,416	576,385
1919.....	180	597,148	575,480	1920.....	206	712,170	781,208
1920.....	238	929,875	984,910	1921.....	241	951,323	966,601
1921.....	222	942,411	855,440	1922.....	228	951,455	907,075
1922.....	294	1,337,280	1,426,860	1923.....	331	1,550,482	1,630,656
1923.....	436	2,193,865	2,218,295	1924.....	436	2,179,073	2,249,559
1924.....	384	1,872,531	1,961,593	1925.....	389	1,904,596	1,996,570
1925.....	424	2,028,034	2,023,398	1926.....	433	2,064,549	2,169,787
1926.....	428	2,032,488	2,272,449	1927.....	456	2,185,651	2,312,351
1927.....	559	2,591,717	2,488,882	1928.....	538	2,454,886	2,469,226
1928.....	527	2,468,297	2,501,630	1929.....	534	2,468,483	2,555,250
1929.....	525	2,498,906	2,534,631	1930.....	515	2,498,385	2,502,519
1930.....	479	2,371,487	2,263,200	(²)	490	2,435,204	2,334,641

* Canal opened August 15, 1914.

¹ Average for 10½ months of fiscal year ended June 30, 1915.

² Canal closed on account of slides.

³ Average for first 11 months calendar year 1930.

Traffic by Nationality for November, 1930.

The following tabulation shows the commercial traffic through the Canal during the month of November, 1930, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for November, 1929 and 1928:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	60	*328,473	237,574	389,323	238,953	\$275,193.46	128,240
Chilean.....	3	10,862	6,837	13,019	7,375	8,546.25	3,527
Colombian.....	5	737	718	1,113	716	869.30	930
Danish.....	4	20,297	12,839	20,845	12,945	16,048.75	13,538
Danzig.....	1	6,127	5,268	8,939	5,007	4,411.44	.....
Dutch.....	6	33,775	23,901	39,808	23,696	29,876.25	20,844
French.....	3	17,938	12,012	20,214	12,288	15,015.00	9,914
German.....	18	60,390	41,299	71,190	42,070	50,043.20	32,187
Italian.....	1	6,497	4,905	8,124	5,128	6,131.25	1,244
Japanese.....	5	23,867	21,170	30,884	21,287	24,284.00	23,027
Norwegian.....	17	79,338	56,235	93,132	55,773	60,959.33	25,878
Panamanian.....	2	6,987	3,978	6,624	4,073	4,968.15	4,039
Swedish.....	6	27,386	19,577	50,955	23,502	20,473.90	16,438
United States.....	100	522,897	392,515	640,572	392,426	450,882.30	269,415
Yugoslav.....	1	3,288	2,355	3,718	2,273	2,943.75	4,877
Total, November, 1930...	232	1,148,859	841,183	1,398,460	847,512	970,646.33	554,098
Total, November, 1929...	271	1,326,585	992,754	1,644,234	994,462	1,133,093.79	810,890
Total, November, 1928...	275	1,340,040	1,010,176	1,652,246	1,010,593	1,144,261.24	780,752

* Includes naval vessel of 5,730 displacement tons.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British	73	377,331	278,645	455,066	280,178	\$348,236.05	486,971
Chilean	1	4,672	3,433	7,310	3,976	4,291.25	3,686
Colombian	5	881	856	1,285	858	900.20	499
Danish	6	27,221	19,687	32,505	19,937	24,603.75	46,753
Danzig	1	6,310	5,346	8,940	5,050	6,632.50	11,324
Dutch	7	38,092	25,330	42,342	25,463	31,662.50	53,887
French	4	25,279	16,691	28,801	17,450	20,863.75	25,324
German	19	74,083	51,909	82,868	51,314	64,035.84	98,171
Greek	4	14,853	11,271	17,978	11,223	14,088.75	29,780
Italian	3	18,015	13,220	24,667	13,974	16,525.00	13,878
Japanese	6	32,291	25,079	40,608	24,320	31,348.75	32,080
Norwegian	11	58,210	40,555	67,006	41,383	50,693.75	87,788
Panamanian	2	262	225	612	229	188.64	.....
Spanish	2	5,188	4,477	6,910	4,230	5,596.25	10,500
Swedish	6	26,809	18,482	39,792	23,006	23,102.50	55,943
United States	96	503,943	334,854	630,270	356,408	480,749.05	739,853
Yugoslav	1	4,188	3,310	5,150	3,281	4,137.50	7,660
Total, November, 1930	247	1,222,628	903,370	1,492,110	912,260	1,127,711.03	1,709,102
Total, November, 1929	254	1,172,321	890,898	1,471,806	892,539	1,111,802.15	1,723,741
Total, November, 1928	252	1,128,257	866,882	1,426,332	872,177	1,081,676.24	1,720,878

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British	133	705,804	516,219	844,389	519,131	\$623,429.51	615,211
Chilean	4	15,534	10,270	20,329	11,351	12,837.50	7,213
Colombian	10	1,618	1,574	2,398	1,574	1,769.50	1,429
Danish	10	47,518	32,526	53,350	32,882	40,657.50	60,296
Danzig	2	12,437	10,614	17,879	10,077	11,093.94	11,324
Dutch	13	71,867	49,231	82,150	29,159	61,638.75	74,731
French	7	43,217	28,703	49,015	29,738	35,878.75	35,238
German	37	134,473	93,208	154,058	93,334	114,079.04	130,358
Greek	4	14,853	11,271	17,978	11,223	14,088.75	29,780
Italian	4	24,512	18,125	32,791	19,102	22,656.25	20,122
Japanese	11	56,158	46,249	71,492	45,607	55,632.75	55,107
Norwegian	28	137,548	96,790	160,138	97,156	111,663.08	113,666
Panamanian	4	7,249	4,203	7,236	4,302	6,156.79	4,039
Spanish	2	5,188	4,477	6,910	4,230	5,596.25	10,500
Swedish	12	54,195	38,059	90,747	46,508	43,676.40	72,381
United States	196	1,031,840	777,369	1,270,842	778,834	931,631.35	1,009,268
Yugoslav	2	7,476	5,665	8,868	5,554	7,081.25	12,537
Total, November, 1930	479	2,371,487	1,744,553	2,890,570	1,759,792	2,098,357.36	2,263,200
Total, November, 1929	525	2,498,906	1,883,652	3,116,040	1,887,001	2,244,895.94	2,534,631
Total, November, 1928	527	2,468,297	1,877,058	3,078,578	1,882,770	2,225,937.48	2,501,630

* Includes naval vessel of 5,730 displacement tons.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending December 6, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cauca	National Navigation Co.	December 1...	December 1...	.....	31
Buenos Aires	Johnson Line	December 1...	December 1...	165	.....
Acajutla	Pacific Steam Navigation Co.	December 2...	December 2...	3	.....
Sanyo Maru	Sanyosha Goshi Kaisha	December 2...	December 3...	213	.....
Guatemala	Panama Mail S. S. Co.	December 2...	December 3...	(1)	.....
Ecuador	Panama Mail S. S. Co.	December 2...	December 3...	12	.....
Villanger	Westfal, Larsen & Co.	December 3...	December 4...	175	.....
Suriname	United Fruit Co.	December 4...	December 5...	298	.....
Nosa Chief	N. O. & S. A. S. S. Co.	December 6...	December 7...	.....	189

* 43 tons and 1 automobile.

United States Intercoastal Traffic by Commodities for November, 1930.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for November, 1930, and the totals for November, 1929 and 1928. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds and are for the United States intercoastal trade only:

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Aeroplanes.....	9	8	17
Agricultural implements.....	1,201	75	1,276
Alfalfa.....		1,893	1,893
Alfalfa meal.....		1,175	1,175
Ammonia.....	36		36
Asbestos.....	732		732
Asphalt.....	144	125	269
Automobiles.....	2,973	81	3,054
Automobile accessories.....	3,835	59	3,894
Bamboo.....		12	12
Bark.....		120	120
Barley.....		582	582
Beans.....	408	5,554	5,962
Bones and bonemeal.....		78	78
Borax.....		687	687
Bricks.....	604		604
Burlap.....	78	62	140
Calcium carbide.....	75		75
Camphor.....		17	17
Canned:			
Fish.....	232	7,470	7,702
Fruit.....	575	33,333	33,908
Meat.....	183	206	389
Milk.....	45	454	499
Soup.....	1,359		1,359
Vegetables.....	771	8,542	9,313
Miscellaneous.....	1,500	6,460	8,020
Carbon black.....	51		51
Cellite filtercel.....		452	452
Cement.....	129	5	124
Charcoal.....	38		38
Chemicals.....	1,198	789	1,987
China and fire clay.....	60	62	122
Coal.....	1,500		1,500
Cocoa.....	75		75
Coconuts.....		492	492
Coffee.....	333	127	460
Coke.....	660		660
Cold storage:			
Beef.....	69		69
Cheese.....		35	35
Eggs.....	200	4	204
Fish.....	34		34
Other.....	1,112		1,112
Confectionery.....	405		405
Copra.....	71	7	78
Cork.....			
Cotton.....	919	1,482	2,401
Cyanide.....	51		51
Drugs.....	1,395	560	1,955
Earthenware.....	226	40	266
Eggs, dried.....		34	34
Explosives.....	35		35
Fish meal.....	22		22
Flour.....	151	6,026	6,177
Fruit:			
Dried.....	205	16,736	16,941
Fresh.....		21	21
Fuller's earth.....	57		57
Furniture.....	673	91	764
General.....	47,904	11,559	59,463
Glass and glassware.....	946	223	1,169
Glue.....		40	40
Hair.....	12	65	77
Hardwoods.....	636	85	721
Hay.....		2,431	2,431

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Hemp.....	68	226	294
Honey.....		286	286
Hops.....		100	100
Infusorial earth.....		385	385
Ink.....	28		28
Lard substitute.....	1,551		1,551
Leather.....		2	2
Linoleum.....	390		390
Liquors.....	117	114	231
Lumber.....	707	131,219	131,926
Malt.....	33	7	40
Manufactured goods:			
Iron and steel.....	64,818	991	65,809
Machinery.....	6,550	352	6,902
Railroad material.....	211		211
Tinplate.....	7,356		7,356
Textiles.....	2,073	141	2,214
Miscellaneous.....	4,120	3,075	7,195
Marble.....	10		10
Matches.....	207		207
Metals:			
Copper.....		3,153	3,153
Iron.....	1,712		1,712
Lead.....	25	447	472
Scrap.....	305	177	482
Tin.....		28	28
Zinc.....		489	489
Milk, powdered.....		597	597
Molasses.....	168		168
Musical instruments.....	30		30
Nuts.....		362	362
Oats.....	72	100	172
Oils:			
Crude.....	52		52
Gas oil, fuel oil.....		46,133	46,133
Gasoline, benzine, naphtha.....	11	223,291	223,302
Lubricating and greases.....	5,291	266	5,557
Olive.....	3		3
Vegetable.....	269	53	322
Whale.....		12	12
Wood.....	5		5
Other.....	31		31
Ores:			
Copper.....		1,400	1,400
Iron.....	31		31
Magnesite.....		54	54
Manganese.....	55		55
Paint.....	375	1,033	1,408
Paper.....	5,468	9,415	14,883
Paper pulp.....		8,405	8,405
Paper roofing.....	75		75
Peanuts.....	13	25	38
Peas.....		31	31
Phosphates.....	1,231		1,231
Porcelain.....	263	175	438
Rags.....		247	247
Rice.....	1,360	4	1,364
Rope.....	53	60	113
Rosin.....	493		493
Rubber:			
Manufactured.....	546	87	633
Scrap.....		50	50
Salt.....	133		133
Sand.....	748		748
Seeds:			
Grass.....		197	197
Hemp.....		24	24
Other.....		423	423
Shells.....	821		821
Silk.....		1,268	1,268
Skins and hides.....		1,874	1,874
Slate.....	703		703
Soap.....	2,813	57	2,870
Soda.....	567		567
Soda ash.....	741		741
Soda, bicarbonate.....	171		171
Soda, caustic.....	154		154
Starch.....	59		59
Sugar.....	28	4,445	4,473
Sulphur.....	4,600		4,600
Syrup.....	60		60
Talc.....		44	44
Tallow.....		293	293
Tar.....	107		107
Tea.....		13	13

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Tobacco.....	1,445	61	1,506
Toys.....	35		35
Turpentine.....	15		15
Vegetables.....	65	8	73
Waste.....		95	95
Wax.....	74		74
Wheat.....		559	559
Wine.....	6	244	250
Wool.....		1,639	1,639
Zinc oxide.....	44		44
Total, November, 1930.....	193,552	552,595	746,147
Total, November, 1929.....	283,399	679,156	962,555
Total, November, 1928.....	234,851	638,489	873,340

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending November 30, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cristobal.....	Panama R. R. S. S. Line.....		November 23.		697
Cali.....	North German Lloyd.....		November 23.		234
Bolivar.....	United Fruit Co.....		November 23.		52
Ulna.....	United Fruit Co.....	November 23.	November 23.	38	441
Swiftscout.....	C. D. Mallory & Co.....	November 23.	November 24.	11,698	(¹)
Canadian Leader.....	Canadian National Steamships.....	November 24.	November 24.	112	(²)
Santa Teresa.....	Grace Line.....	November 24.	November 24.	268	(²)
Damsterdijk.....	Holland-America Line.....	November 24.	November 24.	(¹)	5
Moveria.....	Donaldson Bros.....	November 24.	November 25.	(¹)	185
Calamares.....	United Fruit Co.....	November 24.	November 26.	478	43 ³
Juan S. Eleano.....	Spanish Line.....		November 25.		611
Simon Bolivar.....	Royal Netherlands S. S. Co.....	November 25.	November 25.	230	(²)
Spreewald.....	Hamburg-American Line.....	November 25.	November 25.	18	148
Theodore Roosevelt.....	Fred Olsen & Co.....	November 25.	November 25.	1	32
Amsterdam.....	Royal Netherlands S. S. Co.....	November 25.	November 26.	186	10
Cuba.....	French Line.....	November 25.	November 28.	133	233
Santa Clara.....	Grace Line.....	November 26.	November 26.	150	132
Teno.....	Chilean Line.....	November 26.	November 26.	76	(²)
Nosa Prince.....	N. O. & S. A. S. S. Co.....	November 26.	November 27.	500	166
Zacapa.....	United Fruit Co.....	November 26.	November 27.	458	374
Vancouver.....	Hamburg-American Line.....	November 26.	November 26.	26	10
Magdalena.....	Hamburg-American Line.....	November 26.	November 26.	126	(²)
Irona.....	United Fruit Co.....	November 26.	November 27.	844	4
Tai Yang.....	Barber S. S. Line.....	November 26.	November 27.	116	49
Washington.....	French Line.....	November 26.	November 27.	113	132
Alkmaar.....	Royal Netherlands S. S. Co.....	November 27.	November 27.	158	19
Darian.....	Leyland S. S. Line.....	November 27.	November 28.	452	(²)
Caldas.....	National Navigation Co.....		November 28.		150
Lochgoil.....	Pacific Steam Navigation Co.....	November 28.	November 29.	88	118
Orduna.....	Pacific Steam Navigation Co.....	November 28.	November 29.	3	(¹)
Simon Bolivar.....	Royal Netherlands S. S. Co.....	November 28.	November 29.	3	139
Amapala.....	Standard Fruit & S. S. Co.....	November 28.	November 29.	268	366
Annie Johnson.....	Johnson S. S. Line.....	November 28.	November 29.	(¹)	100
Durazzo.....	Hamburg-American Line.....	November 28.	November 30.	542	10
Tacoma.....	Hamburg-American Line.....	November 28.	November 30.	27	486
Manizales.....	North German Lloyd.....	November 28.	November 30.	613 ³	59
Buenaventura.....	Panama R. R. S. S. Line.....	November 28.	November 30.	730	18
Pearl Maria.....	R. Feuillebois.....	November 29.	November 29.	(¹)	20
Irona.....	United Fruit Co.....	November 29.	November 29.	(¹)	261
Poseidon.....	Hamburg-American Line.....	November 29.	November 29.	41	(²)
San Rafael.....	Quaker S. S. Line.....	November 29.	November 29.	35	(²)
Baracao.....	United Fruit Co.....	November 29.	November 29.	79	52
Nietheroy.....	Pacific Steam Navigation Co.....	November 29.	November 30.	315	120
Magdalena.....	Hamburg-American Line.....	November 29.	November 30.	(¹)	377
Calamares.....	United Fruit Co.....	November 30.	November 30.	11	509
Buenos Aires.....	Johnson S. S. Line.....	November 30.		106	
Colombo.....	Italian S. S. Line.....	November 30.		79	
Cauca.....	National Navigation Co.....	November 30.	November 30.	180	257
Canadian Highlander.....	Canadian National Steamships.....	November 30.	November 30.	43	(²)
Salvador.....	Pacific Steam Navigation Co.....		November 30.		734

¹ No cargo discharged.² No cargo laded.³ One package

Ships' Chandlery Supplies.

Panama Canal storehouses stock a complete line of ships' chandlery supplies available for sale

to shipping at cost prices plus 25 per cent surcharge, which surcharge includes freight, handling, and other costs.

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Volume XXIV. Balboa Heights, C. Z., December 17, 1930. No. 20.

Cargo Through the Canal During November, 1930.

On pages 284 and 285 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in November, 1930. This cargo, segregated according to direction, as compared with November, 1929, and the differences, are shown in the following tabulation:

	November, 1929.	November, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	810,890	554,098	-256,792
Pacific to Atlantic.....	1,723,741	1,709,102	-14,639
Total.....	2,534,631	2,263,200	-271,431

It will be noted above that the Atlantic to Pacific tonnage decreased 256,792 tons (31.7 per cent), as compared with November, 1929, and that from the Pacific to the Atlantic decreased 14,639 tons (0.85 per cent), making a total decrease of cargo tonnage in both directions of 271,431 tons (10.7 per cent). As has been pointed out in several previous reports the general decline in Pacific-bound tonnage has been due to a general curtailment in shipments in this direction. These shipments reached a particularly low ebb last month when the tonnage in this direction was the lightest since August, 1924, when 531,703 long tons were passed through. Tonnage in the opposite direction showed less than 1 per cent decrease under November, 1929, accounted for by increases in the shipments of several important food commodities, which almost completely absorbed the losses in other important products.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-three and three-tenths per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 28.9 per cent in Europe. Tonnage from the United States decreased 200,544 tons (36.4 per cent) in comparison with November, 1929, and that from Europe declined 31,873 tons (16.6 per cent). The proportion of the total tonnage originating in the United States was also lower in November, 1930, than in November, 1929, while the proportionate amount coming from Europe was greater.

Destination.—Forty-six per cent of the Pacific-bound cargo tonnage was destined to the United States; 19.7 per cent to Asia; 15.9 per cent to South America; and 10.1 per cent to Australasia. Tonnage to all these areas declined as compared with November, 1929, as follows: To the United States, 92,004 tons (26.5 per cent); to Asia, 75,073 tons (40.6 per cent); to South America, 35,194 tons (28.6 per cent); and to Australasia, 45,092 tons (44.7 per cent). With respect to the

porportion of the cargo tonnage to these various areas to the total Pacific-bound tonnage, increases were registered in that to United States and South America, while that to Asia and Australasia decreased.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 50.3 per cent came from the United States; 28.3 per cent from South America; 13.9 per cent from Canada; 3.9 per cent from Australasia; and 2.6 per cent from Asia. The amounts coming from Canada, Australasia, and Asia showed relative as well as actual increases of 67,811 tons (40.1 per cent); 30,938 tons (85.4 per cent); and 9,455 tons (27.1 per cent), respectively, as compared with November, 1929. Tonnage from the United States and South America decreased relatively as well as in actual tonnage in the amounts of 102,780 tons (10.7 per cent) and 35,178 tons (6.8 per cent). The large increase in the shipments of wheat was principally responsible for the large increase of cargo originating in Canada.

Destination.—Segregated according to destination, 47.4 per cent of the cargo tonnage moving from the Pacific to the Atlantic went to the United States, and 48.2 per cent to Europe. Tonnage to Europe increased 174,374 tons (26.8 per cent) as compared with November, 1929, as did the percentage of the total. That to the United States decreased 178,089 tons (18 per cent) in comparison with November, 1929. The decreased tonnage to the United States was principally due to curtailed shipments of mineral oils, lumber, and ores (principally iron), while the increase to Europe was accounted for principally by larger shipments of grain and fresh fruits from the Pacific Northwest.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify 83 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 17 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for November, 1929, or November, 1930, are listed in the following tabulation, showing differences:

Commodity.	November, 1929.	November 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia.....	17,802	10,165	-7,637
Automobiles.....	18,983	4,552	-14,431
Cement.....	36,536	24,885	-11,651
Coal and coke.....	28,844	11,182	-17,662
Cotton.....	39,360	25,819	-13,541
Manufactured goods:			
Iron and steel.....	199,394	109,209	-90,185
Machinery.....	15,637	15,236	-401
Railroad material.....	15,702	7,250	-8,452
Tinplate.....	20,246	19,856	-390
Textiles.....	10,347	6,013	-4,334
Miscellaneous.....	17,682	8,608	-9,074
Mineral oils.....	46,057	39,342	-6,715
Paper.....	18,988	13,202	-5,786
Phosphates.....	23,202	21,451	-1,751
Sulphur.....	13,225	4,607	-8,618
Tobacco.....	10,861	8,625	-2,236

The above 16 commodity groups for November, 1930, comprise 59.5 per cent of the cargo moving from the Atlantic to the Pacific. All of the items showed decreases in comparison with November, 1929.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

From the cargo declarations submitted it was possible to classify almost 99 per cent of the cargo moving from the Pacific to the Atlantic during the month of November, 1930. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1929 are listed below:

Commodity.	November, 1929.	November, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	
Barley.....	22,210	20,944	-1,266
Beans.....	10,145	6,941	-3,204
Canned goods (fish, fruit, vegetables, etc.).....	98,019	93,928	-4,091
Cold storage (food products) *.....	15,938	24,827	+8,889
Cotton.....	10,929	7,991	-2,938
Flour.....	8,298	10,102	+1,804
Fruit, dried.....	40,793	46,693	+5,900
Fruit, fresh.....	14,405	38,367	+23,962
Lumber.....	266,994	195,273	-71,721
Metals, various.....	62,422	45,443	-16,979
Nitrates.....	211,554	226,197	+14,643
Oils, mineral.....	485,533	408,065	-77,518
Ores (principally iron).....	183,667	137,429	-46,238
Paper.....	6,989	11,216	+4,227
Paper pulp.....	6,948	11,139	+4,191
Sugar.....	35,639	69,724	+34,085
Wheat.....	121,984	221,309	+99,325

* Does not include fresh fruit.

The above 17 commodity groups for November, 1930, comprise 02.2 per cent of the cargo moving from the Pacific to the Atlantic. Nine of the items showed increases and 8 decreases. The heaviest increases were in shipments of wheat, fresh fruits, and sugar, while mineral oils, lumber, and ores (principally iron) registered rather heavy decreases.

(Continued on next page.)

New Libera Liner Due Here on December 26.

The passenger and cargo steamer *California*, acquired some months ago by the Navigazione Libera Triestina (Libera Line) from the Cunard Line, is due to arrive at Cristobal on December 26, 1930, on her maiden voyage in the former company's service between Mediterranean ports and the Pacific coast of North America. The new vessel, which is 523 feet long, 64 feet beam, and of 12,768 gross tons, 20,000 tons displacement, is to be operated at a speed of 14 knots, and will afford a 25-day service between Mediterranean ports and the Pacific coast. Accommodations are provided for 138 first-class and 24 second-class passengers.

On her homeward journey from the Pacific coast, the new vessel is to be utilized by the American Express Company in the initial phase of a comprehensive tour of Southern Europe. The party will sail from Pacific coast ports in January next, after the vessel has made calls at Vancouver, Portland, San Francisco, and Los Angeles, sailing from the latter port January 30th.

The *California* is the largest vessel yet to be placed in the service between Europe and the Pacific coast of North America, which ranks as the second largest trade serving the Panama Canal. The vessel, which was formerly the *Albania*, was previously operated in the trans-Atlantic service.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, November, 1930.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA						EUROPE											Grand total	Per cent of total cargo.				
	North Atlan- tic ports.	South Atlan- tic ports.	United States.	East coast of Canada.	East coast of Cen- tral America.	Cristobal, C. Z., ^a	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.			Europe, ¹	Total, Europe.	East coast of South America.	Egypt.
NORTH AMERICA:																							
West coast of United States	507,698	5,497,390	4,000,532	595	1,130,411	210,894	935	116,513	1,519	407	13,976,366	398	10,840	6,089	16,014	15	60,703,262	424	270	857,629	50.3		
West coast of Canada	24,563	1,225	25,788		1,161	1,913	27,862	113,046	6,782	132	6,386	3,891	9,090	723	11,326		54,991,203	367	556	236,785	13.9		
West coast of Cen. Amer.	417		617		1,105	201	1,223	7				432	84					137	660	76	2,459	0.1	
Bahobol, C. Z.			264				294														294		
Hawaiian Islands			16,138	16,138			16,138														16,138	0.9	
Total, North America	532,678	5,497,057	4,057,595	232	2,396,433	210,894	935	116,513	8,301	539	20,362,427	21	20,014	6,762	27,340	15	115,831	471,451	902	1,113,305	65.2		
SOUTH AMERICA:																							
Chile	120,939	9,114	8,223	138,276	136	459	138,871	13,202	1,933	1,640	5,718	3,340	254	4,543	381	432	206,162	237,605		376,476	22.0		
Colombia	2,109		2,109		2,869	17	4,995				159							159			5,154	0.3	
Ecuador	14,359		14,359		2,093		16,452	82			385						75	32	574	556	17,582	1.0	
Peru	4,966		4,966	15,860	617	36	21,479	26,566	1,081	100	7,795	13,305	2,657				9,187	60,691		82,170	4.8		
West coast of S. America	58		58		1,657		1,715				636							494	1,160		2,875	0.2	
Total, South America	142,431	9,114	8,223	159,708	15,860	7,372	512	183,512	39,750	3,014	17,400	13,613	17,440	2,911	4,958	381	507	215,875	300,189	556	484,257	28.3	
AUSTRALASIA:																							
Australia	9,510		9,510	2,785	82	12,377		27,335															
New Zealand	835		835	108	75	1,018		27,335															
Australasia ¹	8,390		8,390			8,390		7,380			2,910							7,850	18,140		26,440	1.5	
Total, Australasia	18,645		18,645	2,893	157	157	21,695	34,715			2,910							7,850	45,475		67,170	3.9	
ASIA:																							
Philippine Islands	17,506		9,500	27,006	194	27,006		27,006															
China	3,565		256	3,821	62	4,015		4,015															
Japan	3,970		206	3,970	62	4,032		4,032															
Far East ¹	2,111			2,317		2,317		7,000															
Total, Asia	27,152		9,962	37,114	256	37,370		7,000															
Grand total	720,906	14,611	75,242	810,759	18,753	10,181	43,856	883,529	311,031	11,315	2,279	36,885	60,161	22,925	11,720	27,721	622	339,556	824,115	1,488	1,709,102	100.0	
Per cent of total cargo:																							
November, 1930	42.1	0.9	4.4	47.4	1.1	0.6	2.6	51.7	18.2	0.7	0.1	2.2	3.5	1.3	0.7	1.6				19.9	48.2	0.1	
November, 1929	51.8	1.6	4.0	57.4	1.8	0.7	1.5	61.6	15.1	1.3	0.1	1.7	4.1	1.0	0.4	1.0	1.2	0.1		12.7	37.7	0.3	
November, 1928	46.4	0.6	3.3	50.3	1.4	0.5	2.1	55.6	19.4	1.4	0.1	2.4	2.9	3.0	0.6	0.8	2.8			10.5	43.9	0.5	

¹ General cargo not routed so as to allow segregation between definite ports. ² Includes both local and transit cargo.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, December, 13, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Barcl.	5	20.00	7	5.00	7	13.57	7	15.10	Dutch.	Royal Neth. S. S. Co.	202.0	33.1	11.0	Cristobal, C. Z.	Guayaquil, Ecuador	General.	70	1,183	742
Kreta.	6	8.45	7	6.55	7	13.54	7	22.58	German.	Hamburg-American Line	309.8	44.1	18.2	Hamburg, Germany	Champerico, Guat.	General.	1,709	3,397	2,337
Siamese	6	19.35	7	6.15	7	13.04	7	14.05	British.	Prince Line, Ltd.	441.5	60.0	19.10	New York, N. Y.	Mamila, P. I.	General.	1,311	9,283	6,401
Huntingdon.	6	20.20	7	7.15	7	14.48	7	18.40	British.	Federal Steam Nav. Co.	520.0	64.0	21.7	Falmouth, Eng.	Wellington, N. Z.	Ballast.	1,178	8,555	9,378
City of Lille.	6	22.25	7	7.45	7	14.26	7	18.50	British.	Ellerman & Bucknall	448.0	58.0	19.4	Norfolk, Va.	Yokohama, Japan.	General.	2,469	9,079	9,028
Iowan.	6	23.00	7	10.40	7	17.30	7	18.40	American.	Amer-Hawaiian Line	407.7	57.7	18.6	Boston, Mass.	Portland, Oreg.	General.	2,276	1,572	1,011
Cerigo.	5	21.35	7	10.20	7	18.32	7	19.46	German.	Hamburg-American Line	227.2	34.4	14.10	Cristobal, C. Z.	Guayaquil, Ecuador	General.	6,520	6,763	4,959
Tatsukawa Maru.	7	00.25	7	10.40	7	18.25	7	19.39	Japanese.	Tatsumi Kisen Kaisha	423.5	55.0	23.1	Boea Grande, Fla.	Shanghai, China.	(*)	2,097	9,894	8,829
Tai Ping.	7	5.40	7	12.20	7	20.18	7	20.18	Norwegian.	Barber S. S. Line.	461.0	60.0	19.10	New York, N. Y.	Shanghai, China.	General.	3,534	6,554	5,287
Hindanger.	7	14.30	7	15.10	7	22.48	8	00.20	Norwegian.	Westfal, Larsen & Co.	393.0	54.9	20.0	San Nicolas, Arg.	Vancouver, B. C.	(*)	4,412	6,352	4,628
Somerby.	7	18.35	8	6.15	8	13.34	8	14.40	British.	Sir R. Ropner & Co.	421.0	54.3	20.9	Houston, Texas	Kobe, Japan.	(*)	3,718	7,000	5,407
New Westminster City.	7	23.40	8	6.15	8	14.04	8	16.15	British.	Sir W. R. Smith & Sons	400.5	54.3	17.6	New Orleans, La.	Kobe, Japan.	General.	1,846	5,760	3,866
Mallard.	8	2.40	8	7.15	8	15.45	8	16.05	American.	U. S. Navy.	180.0	31.6	10.8	Cristobal, C. Z.	Balboa, C. Z.	General.	1,200	7,209	5,172
Pear Branch.	8	6.45	8	7.15	8	15.20	8	21.00	British.	F. & W. Ritson.	395.6	53.8	18.6	Glasgow, Scotland	Valparaiso, Chile.	General.	1,846	5,760	3,866
New Orleans.	8	6.45	8	7.15	8	15.20	8	21.00	American.	Roosevelt S. S. Co., S. B.	395.0	55.0	17.0	New York, N. Y.	Freemantle, Australia	General.	1,200	7,209	5,172
Asheville.	26	19.20	8	9.00	8	17.20	8	17.20	American.	U. S. Navy.	235.0	41.2	12.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	.....	.....	.....
S-12.	8	9.00	8	9.00	8	17.12	8	17.12	American.	U. S. Navy.	231.0	21.0	11.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	.....	.....	.....
S-15.	8	9.00	8	9.00	8	17.12	8	17.12	American.	U. S. Navy.	231.0	21.0	11.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	.....	.....	.....
Mobile City.	8	6.55	8	9.05	8	16.52	8	18.10	American.	Isthmian S. S. Lines.	335.6	55.0	24.10	New York, N. Y.	Seattle, Wash.	Steel, general.	7,316	7,330	5,241
Mary D.	8	11.45	8	11.55	8	20.13	8	21.20	American.	Strange & Co.	380.2	53.1	13.0	Baltimore, Md.	Bellingham, Wash.	Ballast.	5,316	5,316	3,943
Eastern Sun.	8	14.20	8	14.30	8	22.28	8	23.48	American.	Sun Oil Co.	430.0	66.0	22.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast.	4,039	7,820	5,980
Barneveld.	8	14.25	9	6.20	9	13.23	10	2.40	Dutch.	Royal Neth. S. S. Co.	400.0	58.2	16.6	Hamburg, Germany	Corral, Chile	General.	1,135	5,680	4,060
Willpolo.	9	2.50	9	6.35	9	13.38	9	14.50	American.	Williams S. S. Line	336.8	52.2	14.3	Baltimore, Md.	Seattle, Wash.	General.	8,317	7,693	5,569
Steel Traveler.	9	6.00	9	7.35	9	13.32	9	21.41	American.	Isthmian S. S. Lines.	424.0	56.0	26.3	Philadelphia, Pa.	Singapore, Str. Set.	General.	3,550	5,893	4,182
Canadian	9	6.30	9	7.40	9	16.12	9	17.30	British.	Can. Nat. Steamships	400.0	52.0	19.9	Montreal, Canada.	Vancouver, B. C.	General.	3,550	5,893	4,182
Sagaineur.	9	7.45	9	14.43	9	14.43	9	14.43	American.	U. S. Navy.	231.0	21.0	11.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	15,435	15,435	4,421
S-16.	8	22.45	9	9.05	9	17.03	9	23.45	Swedish.	Ore S. S. Corp.	561.1	72.2	23.6	New York, N. Y.	Cruz Grande, Chile	Ballast.	10,300	8,013	4,683
Svealand.	9	6.10	9	10.40	9	19.11	10	7.15	American.	Calmar S. S. Corp.	450.6	57.2	28.6	Baltimore, Md.	Seattle, Wash.	Steel, general.	2,021	11,007	7,688
Cubrose.	9	7.45	9	12.20	9	19.28	9	21.00	American.	Amer-Hawaiian Line	471.0	59.6	16.8	Boston, Mass.	Seattle, Wash.	General.	2,021	11,007	7,688
Nobrak.	8	15.50	9	13.20	9	21.10	9	22.54	German.	North German Lloyd	521.0	64.0	23.0	Hamburg, Germany	Vancouver, B. C.	General.	3,287	7,047	5,688
Susan V.	9	16.55	9	19.55	10	9.27	10	10.21	American.	Luckenbach Line.	484.0	57.0	18.0	New York, N. Y.	Seattle, Wash.	General.	7,491	6,209	4,658
Luckenbach.	9	20.50	10	6.00	10	13.38	10	15.10	Japanese.	Kokusai Kisen Kaisha.	385.0	51.0	26.10	Montreal, Canada.	Kobe, Japan.	Wheat, alum um.	7,491	6,209	4,658
France Maru.	9	21.30	10	6.20	10	14.15	10	15.25	British.	Andrew Weir & Co.	420.0	53.9	14.8	New York, N. Y.	Caleta Buena, Chile	Ballast.	7,091	7,091	5,014
Inverbank.	9	21.30	10	6.20	10	14.15	10	15.25	British.	Andrew Weir & Co.	420.0	53.9	14.8	New York, N. Y.	Caleta Buena, Chile	Ballast.	7,091	7,091	5,014

1 Tanker. 2 Motor ship. 3 Mines sweeper. 4 Gunboat. 5 Submarine. 6 Phosphate, cotton, and carbon black. 7 Maize, coffee, bran, and fertilizer.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam, water draft.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Antietam ¹	7	4 00	7	8 49	7	19 30	7	19 30	American	Shell Eastern Pet. Prod.	433.6	56.2	28.0	Los Angeles, Calif.	Fall River, Mass.	Wheat, general.	10,397	5,073
Callina ¹	7	3 30	7	9 30	7	19 45	7	21 45	Italian	Nav. Libera Trieste	436.6	55.4	26.5	Seattle, Wash.	Trieste, Italy	Lumber, general.	8,856	7,900
Willard	7	15 15	7	15 57	7	23 20	7	23 20	American	Williams S. S. Line	386.8	52.2	23.0	Everett, Wash.	Baltimore, Md.	Lumber, general.	5,600	5,684
Snyder	7	17 00	8	6 23	8	13 50	8	13 50	Norwegian	Pet. Stor. & Fin. Corp.	408.3	55.3	28.2	Los Angeles, Calif.	Azores ¹⁷	Gasoline.	8,442	6,466
Solvan Arrow	7	17 30	8	7 05	8	15 45	8	13 45	American	Standard Transp. Co.	467.6	62.7	28.4	Los Angeles, Calif.	New York, N. Y.	Gasoline.	12,512	9,698
Hilder	7	18 41	8	7 32	8	17 45	8	17 45	American	Arrow Line	409.6	54.2	29.0	Portland, Ore.	Baltimore, Md.	Lumber	7,500	6,667
Lochmonar ¹⁴	7	21 05	8	7 58	8	16 40	8	20 50	British	Royal Mail S. P. Co.	485.6	62.2	24.0	Vancouver, B. C.	Rotterdam, Holland	General.	8,078	7,729
Ponona	7	21 00	8	8 10	8	19 40	8	20 50	American	Pomona S. S. Co.	440.0	56.0	28.3	Valparaiso, Chile	Baltimore, Md.	Lumber	8,000	8,324
Rheda	7	23 00	8	6 52	8	19 35	8	23 45	German	Hamburg-American Line	453.6	58.1	24.0	Valparaiso, Chile	Hamburg, Germany	General.	8,352	8,071
Point Reyes	8	0 30	8	9 21	8	20 15	8	20 15	American	GulPac. Redwood Line	324.0	46.2	21.1	Portland, Ore.	New Orleans, La.	Lumber, general.	3,498	3,984
Temple Lane.	8	0 00	8	9 52	8	20 45	8	21 45	British	Association Nitrate Co.	390.0	52.0	24.0	Caleta Colcha, Chile	Azores ¹⁷	Nitrate of soda.	7,600	5,813
Western ¹⁴	8	8 00	8	10 46	8	22 00	8	22 00	American	Sun Oil Co.	480.6	66.0	28.4	Los Angeles, Calif.	Marcus Hook, Pa.	Gasoline.	13,155	9,607
Sun	8	9 15	8	10 29	8	20 25	8	20 25	British	Pacific Steam Nav. Co.	210.1	41.7	16.0	Champerico, Guat.	Cristobal, C. Z.	Coffee, hides.	152	2,597
Champerico	8	11 00	8	14 22	8	22 00	8	22 00	Colombian	National Navigation Co.	116.0	21.1	8.0	Puntarenas, C. R.	Bocas del Toro, P. R.	75 mules	211	124
Caldas	8	12 30	8	16 03	8	22 45	9	2 30	American	Grace Line	370.0	53.2	18.0	Talcahuano, Chile	New York, N. Y.	General	854	6,254
Santa Rita ¹⁴	8	13 00	8	19 46	9	12 30	9	15 50	Norwegian	Fred Olsen & Co.	435.9	56.2	28.0	Vancouver, B. C.	Oslo, Norway	General	8,370	8,016
Kaite Nelson ¹⁴	8	11 15	9	6 18	9	14 30	9	15 10	American	Panama-Pacific Line	586.4	80.3	30.0	San Francisco, Cal.	New York, N. Y.	General	4,500	25,262
Pennsylvania ¹⁴	8	19 00	9	6 49	9	15 30	9	15 30	American	U. S. Government	237.5	42.1	17.0	San Diego, Calif.	Galveston, Tex.	General	4,500	25,262
Saratoga ¹⁴	9	4 30	9	7 32	9	18 30	9	18 30	Japanese	Taisho Kaun Co., Ltd.	445.0	58.0	30.0	Vancouver, B. C.	Belfast, Ireland	Wheat, lumber	9,368	8,299
Newu Maru.	9	5 40	9	7 51	9	17 00	9	17 00	American	Luckenbach Line.	471.1	59.2	22.0	Portland, Ore.	Boston, Mass.	General	5,372	9,027
Liabenbach.	9	19 40	9	9 51	9	19 15	9	21 00	American	Nippon Yusen Kaisha.	445.0	58.0	18.3	Marilla, P. I.	New York, N. Y.	General	3,568	8,015
Georgian	9	17 15	9	14 01	9	21 00	9	21 00	American	Amer-Hawaiian Line.	434.5	57.7	24.0	Seattle, Wash.	Boston, Mass.	Lumber	7,637	7,983
Steel Ranger	9	17 10	9	17 50	10	11 45	10	11 45	American	Isthmian S. S. Lines	424.2	56.2	26.0	Seattle, Wash.	New York, N. Y.	Lumber	7,286	7,611
Burrill	9	19 05	9	20 08	10	11 50	10	11 50	British	Milroy & Davis, Ltd.	405.0	53.0	25.0	Vancouver, B. C.	Hamburg, Germany	Wheat	7,520	5,556
Shumburn.	10	00 20	10	6 58	10	14 25	10	14 25	British	Culliford & Clark.	300.0	53.5	25.0	Vancouver, B. C.	Aronmouth, Eng.	Wheat	8,030	5,625
Lyeta ¹⁴	10	00 25	10	7 27	10	14 40	10	14 40	British	Canadian Transp. Co.	300.0	44.2	22.0	Vancouver, B. C.	St. Johns, N. F.	Lumber, general	3,664	3,333
Cauca ¹⁴	9	23 55	10	7 41	10	16 42	10	16 42	Colombian	National Navigation Co.	107.0	22.9	9.0	Buenaventura, Col.	Cristobal, C. Z.	Coffee, mach y.	85	238
Manataway ¹⁴	9	19 22	10	8 48	10	16 30	10	16 30	American	Calmar Oil Co. of Calif.	390.0	54.2	25.0	Los Angeles, Calif.	Baltimore, Md.	Dark gas oil.	6,281	6,205
Yorknar	10	6 40	10	9 05	10	16 50	10	16 50	American	Calmar S. S. Corp.	409.8	54.2	26.0	Tacoma, Wash.	New York, N. Y.	Lumber	7,112	6,757
Herdford	10	9 25	10	10 10	10	17 05	10	17 05	British	Federal Steam Nav. Co.	520.0	64.2	26.0	Auckland, N. Z.	London, England	Forzen, general.	6,757	12,933
Colombia ¹⁴	10	16 10	10	16 48	11	11 05	11	11 05	Danish	Strange & Co.	384.7	54.5	26.0	Victoria, B. C.	New York, N. Y.	Lumber	7,200	6,427
Delancey ¹⁴	9	21 55	10	18 40	11	12 10	11	12 50	American	Roosevelt S. Co., S. B.	456.1	56.0	21.0	Shanghai, China	New York, N. Y.	General	4,151	8,313
Letician ¹⁴	10	23 00	11	6 26	11	13 40	11	13 40	British	Trinidad Leasehold.	364.0	51.1	19.0	Bahboa, C. Z.	Pto. Caballo, Ven.	Ballast	5,016	3,285
Yainul	10	17 30	11	6 42	11	14 15	11	14 15	British	Shaw, Savill & Albion.	477.8	61.7	23.0	London, England	London, England	Frozen, general.	3,569	10,637
Yainud	10	17 30	11	7 17	11	15 35	11	15 35	Norwegian	Den. Skarv Syd. Pab.	368.5	52.1	23.0	Pt. Chalmers, N. Z.	London, England	General	6,427	7,617
S-12 ¹⁴	11	8 25	11	8 25	11	15 25	11	15 25	American	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.	General	6,427	5,413

¹⁴ Tanker.

¹⁵ Motor ship.

¹⁶ Submarine.

¹⁷ For orders.

¹⁸ Kerosene and furnace oil.

¹⁹ Gasoline and fuel distillate.

²⁰ Wheat, lumber, and general.

City of	Date	Vessel	Line	From—	Date	Vessel	Line	To—
Tashmoo	11 9 57	11 10 51	11 18 10	11 20 25	American	Charles Nelson & Co.	Seattle, Wash.	New York, N. Y.
Quebec City	11 10 20	11 11 20	11 18 20	11 18 20	British	Reardon Smith Line	Vancouver, B. C.	Cardiff, Wales.
Ario	11 10 50	11 11 57	11 20 30	11 20 30	American	Standard Oil Co., N.Y.	Los Angeles, Calif.	New York, N. Y.
Panama	11 11 40	11 12 15	11 20 00	11 19 30	American	Panama Mail S. S. Co.	San Francisco, Cal.	Cristobal, C. Z.
Guardian	25 2 30	11 14 24	11 21 35	12 9 40	American	All America Cables, Inc.	San Juan del Sur.	Cristobal, C. Z.
Charles R. McCormick	11 13 40	11 14 36	11 22 00	11 22 00	American	Munson, McCor'k Line.	San Francisco, Cal.	New York, N. Y.
Lena	11 16 30	11 17 42	12 11 20	12 11 20	American	Lukenbach Line.	Portland, Oreg.	Mobile, Ala.
Lucy	11 19 00	11 19 36	12 13 05	12 17 25	Norwegian	Companie "El Agulla"	Anacortes, Wash.	Tampico, Mexico.
Sir Karl Knudsen	11 18 15	12 6 26	12 18 00	12 20 00	Norwegian	Anglo-Saxon Pet. Co.	Los Angeles, Calif.	Lands End, Eng.
Panama	12 4 35	12 7 08	12 17 25	12 19 00	Danish	East Asiatic Co.	Seattle, Wash.	Copenhagen, Den.
Calli	12 5 10	12 7 12	12 18 45	14 10 05	German	Roland Line	Guayaquil, Ecuador	Cristobal, C. Z.
Messico	12 2 30	12 9 30	12 19 13	14 05	Italian	Rolian Nav. & Transp.	Tocopilla, Chile	Azores
Solana	12 13 05	12 14 28	12 22 26	13 00 20	American	Tidewater Oil Co.	San Francisco, Cal.	New York, N. Y.
Mexican	12 17 15	12 17 50	13 9 05	13 9 05	American	Amer-Hawaiian Line.	Tacoma, Wash.	New York, Mass.
Hakuhaku	13 3 20	13 6 28	13 18 30	13 22 00	Japanese	Tatsuma Kisen Kaisha.	Saigon, China.	Rice
Oropesa	12 18 30	13 8 18	13 18 05	13 21 34	British	Pacific Steam Nav. Co.	Talcahuano, Chile.	La Guayra, Cuba.
Konigsberg	13 8 30	13 9 30	13 20 00	14 00 01	German	North German Lloyd.	Valparaiso, Chile.	Liverpool, England
San Lucas	13 10 00	13 10 44	13 19 35	13 22 00	American	States S. S. Corp.	Vancouver, B. C.	Bremen, Germany
Pacific Oak	13 10 30	13 11 06	13 20 50	13 20 50	American	Dimon S. S. Corp.	Los Angeles, Calif.	London, England
El Aleto	13 14 15	13 15 00	13 22 10	13 22 10	British	Imperial Oil Co., Ltd.	Lobitos, Peru	Norfolk, Va.
San Vincente	13 14 20	13 15 16	13 23 05	13 23 10	American	States S. S. Co.	Portland, Oreg.	Halifax, N. S.
Stallman	13 15 00	13 18 06	14 13 30	14 13 30	British	Inter. Petroleum Co.	Talara, Peru	New York, N. Y.
Bitterfield	13 18 05	13 18 43	14 11 55	15 1 50	German	Hamburg-American Line	Vancouver, B. C.	Hamburg, Germany

1 Tanker.

21 Light fuel distillate.

22 Canned fruit and general.

23 Copper, tin, ores, etc.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmidnight.

PORT OF CRISTOBAL

ARRIVALS.				DEPARTURES.			
Date	Vessel	Line	From—	Date	Vessel	Line	To—
December 7	Tolon	United Fruit Co.	Port Limon, Costa Rica.	December 7	No. 668	Pan American Airways	Miami via waypoints.
December 7	S. M. Spalding	Huasteca Petroleum Co.	Aruba, D. W. I.	December 7	No. 9685	Pan American Airways	San Salvador and waypoints.
December 8	Estuero	John Rasmussen.	Bluefields, Nicaragua.	December 7	Tolon	United Fruit Co.	New York via Habana.
December 8	No. 9670	French Line	St. Nazaire and waypoints.	December 7	Arcon	Panama R. R. S. S. Line	New York via Haiti.
December 8	Peruvia	Pan American Airways	San Salvador and waypoints.	December 9	S. M. Spalding	Huasteca Petroleum Co.	Aruba, D. W. I.
December 8	Coroiba C-40	Scelta Alipiane Co.	Barranquilla and waypoints.	December 9	French Line	Guatemala S. S. Line	New York via waypoints.
December 9	Abangarez	United Fruit Co.	New York via Habana.	December 10	No. 9688	Pan American Airways	San Salvador and waypoints.
December 9	Princess	Guatemala S. S. Line.	New York via waypoints.	December 10	Princess	Pan American Airways	Port Limon, Costa Rica.
December 9	Metapan	Royal Netherlands S. S. Co.	Hamburg via waypoints.	December 10	Estuero	John Rasmussen.	Bluefields, Nicaragua.
December 10	Irona	United Fruit Co.	New York via Kingston.	December 10	Abangarez	United Fruit Co.	Port Limon, Costa Rica.
			New Orleans, La.				

* Other than ships passing through the Canal.

24 Motor schooner.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.			* DEPARTURES.		
Date.	Vessel.	From—	Date.	Vessel.	For—
December 10.	No. 670 M ²⁶ .	Miami via waypoints.	December 11.	Iriom.	Port Limon, Costa Rica.
December 10.	No. 9685 ²⁶ .	San Salvador and wayp'ts.	December 11.	No. 310-N ²⁶ .	Talara via waypoints.
December 10.	Standard Fruit & S. S. Co.	New Orleans via Habana.	December 11.	Waura.	Puerto Cabezas, N.C.
December 12.	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	December 11.	No. 309-N ²⁶ .	La Guayra via waypoints.
December 12.	United Fruit Co.	Colon, Rep. of Panama.	December 11.	Metapan.	New York via waypoints.
December 12.	Anacuacuna ²⁷ .	Port Limon, Costa Rica.	December 12.	Anacuacuna ²⁷ .	Colon, Rep. of Panama.
December 13.	Abangarez.	Tampico via waypoints.	December 12.	No. 9670 ²⁶ .	San Salvador and wayp'ts.
December 13.	Galicia.	Port Limon, Costa Rica.	December 12.	Cordoba C-40 ²⁶ .	Barranquilla & Cartagena.
December 13.	Davisian.	La Guayra via wayp'ts.	December 13.	Atlantida.	New Orleans and wayp'ts.
December 13.	No. 309-N ²⁶ .	Port Limon, Costa Rica.	December 13.	Crynsen.	Amsterdam and wayp'ts.
December 13.	No. 668-M ²⁶ .	La Guayra via wayp'ts.	December 13.	Royal Netherlands S. S. Co.	Liverpool via waypoints.
December 13.	No. 9688 ²⁶ .	Miami via waypoints.	December 13.	Leyland S. S. Line.	New Orleans and wayp'ts.
December 13.	Martimque.	San Salvador and wayp'ts.	December 13.	Iriom.	Cartagena, Colombia.
December 13.	El Panquiaco.	New York via waypoints.	December 13.	Galicia.	New York via Habana.
December 13.	A. Tagaropolos.	Colon, Rep. of Panama.	December 13.	Inapaquina ²⁷ .	Colon, Rep. of Panama.
December 13.		Colon, Rep. of Panama.	December 13.	El Panquiaco.	Colon, Rep. of Panama.

²⁶ Air mail carrier. ²⁷ Motor boat.

PORT OF BALBOA.

December 7.	Nora ¹ .	Los Angeles, Calif.	December 9.	Nora ¹ .	Los Angeles, Calif.
December 12.	Real ²⁸ .	Panama Bay, R. P.	December 12.	Real ²⁸ .	Panama Bay, R. P.
December 12.	Ligia Elena ²⁸ .	Panama Bay, R. P.	December 12.	Ligia Elena ²⁸ .	Panama Bay, R. P.
December 12.	Liberator ²⁸ .	Panama Bay, R. P.	December 12.	Liberator ²⁸ .	Panama Bay, R. P.
December 12.	Nueva Panama ²⁹ .	Panama Bay, R. P.	December 12.	Nueva Panama ²⁹ .	Panama Bay, R. P.
December 9.	Fortuna ²⁹ .	San Francisco, Calif.	December 13.	La Perla.	Panama Bay, R. P.
December 9.	Condor.	Buenaventura, Colombia.	December 13.	United Fruit Co.	San Francisco, Calif.
December 12.		Valparaiso, Chile.		Grace Line.	

¹ Tanker. ²⁸ Motor schooner. ²⁹ Motor ship.

* Other than ships passing through the Canal.

Commercial Traffic Through the Panama Canal in November, 1930, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of November, 1930, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for November, 1929 and 1928. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States.....	71	388,619	293,075	474,238	292,981	\$332,329.91	171,379
Europe to west coast Canada:							
British.....	14	77,585	56,031	89,867	55,811	59,384.05	6,316
Danish.....	1	5,303	4,223	6,637	4,223	5,278.75	3,776
Dutch.....	2	14,332	11,060	17,875	11,184	13,825.00	3,165
French.....	1	7,475	4,446	7,817	4,667	5,557.50	3,358
German.....	3	20,314	12,613	22,180	13,259	15,766.25	14,766
Italian.....	1	6,497	4,905	8,124	5,128	6,131.25	1,244
Norwegian.....	2	11,626	6,970	11,390	7,092	8,712.50	6,971
Swedish.....	1	5,337	2,861	5,210	3,747	3,576.25	6,565
Total.....	25	148,469	103,109	169,100	105,111	118,231.55	46,161
East coast of United States to west coast of South America:							
British.....	3	9,400	8,068	13,119	8,117	7,370.69	666
Chilean.....	2	10,659	6,652	12,658	7,201	8,315.00	3,425
Danish.....	2	9,494	5,535	9,170	5,567	6,918.75	4,850
Norwegian.....	1	6,246	3,953	6,698	3,891	4,941.25	.....
Swedish.....	3	12,995	10,683	35,700	12,593	9,356.40	.....
United States.....	10	40,321	30,734	55,650	30,724	34,057.50	16,732
Total.....	21	89,115	65,625	132,995	68,093	70,959.59	25,673
East coast of United States to Far East:							
British.....	9	51,064	31,578	53,299	31,621	39,472.50	43,707
Danish.....	1	5,500	3,081	5,038	3,155	3,851.25	4,912
Japanese.....	4	19,467	16,813	25,020	17,028	21,016.25	33,027
Norwegian.....	1	4,538	2,477	4,116	2,454	3,096.25	3,100
United States.....	5	28,385	20,950	32,354	20,927	26,187.50	33,912
Total.....	20	108,954	74,899	119,827	75,185	93,623.75	108,658
Europe to west coast of South America:							
British.....	5	34,958	27,089	45,643	28,400	33,861.25	20,558
Chilean.....	1	203	185	361	174	231.25	102
Danzig.....	1	6,127	5,268	8,939	5,007	4,411.44	.....
Dutch.....	2	14,593	9,093	15,618	8,900	11,366.25	10,315
French.....	1	4,834	3,223	5,390	3,219	4,028.75	2,862
German.....	4	19,166	14,013	23,041	14,984	17,516.25	14,239
Norwegian.....	1	3,797	3,039	5,041	3,101	3,798.75	5,253
Yugoslav.....	1	3,288	2,355	3,718	2,273	2,943.75	4,877
Total.....	16	86,966	64,265	107,751	64,798	78,157.69	58,206
Europe to west coast of United States:							
British.....	8	41,785	30,364	49,167	30,305	33,308.74	8,622
German.....	2	10,844	8,272	14,028	8,139	8,759.45	265
Norwegian.....	3	16,305	14,006	23,173	13,920	11,829.60	.....
Swedish.....	1	3,708	2,565	4,257	2,862	3,206.25	5,000
United States.....	1	4,339	3,072	5,031	3,106	3,840.00	4,102
Total.....	15	76,981	58,279	95,656	58,332	60,944.04	17,989
Cristobal to west coast of South America:							
Colombian.....	5	737	718	1,113	716	869.30	930
Dutch.....	1	742	294	780	323	367.50	35
German.....	7	5,971	4,014	7,574	4,146	5,017.50	988
Total.....	13	7,450	5,026	9,467	5,185	6,254.30	1,953

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Europe to Australasia:							
British.....	7	52,724	39,390	63,621	39,912	\$49,219.42	31,939
French.....	1	5,629	4,343	7,007	4,402	5,428.75	3,694
Swedish.....	1	5,346	3,468	5,788	4,300	4,335.00	4,873
Total.....	9	63,699	47,201	76,416	48,614	58,983.17	40,506
Foreign vessels in ballast— United States inter-coastal:							
British.....	2	11,012	9,678	15,799	9,566	7,928.64	.....
Norwegian.....	3	15,386	11,780	19,668	11,601	11,077.92	.....
Total.....	5	26,398	21,458	35,467	21,167	19,006.56	.....
East coast of United States to Australasia:							
British.....	4	30,113	19,161	30,552	19,286	23,951.25	6,487
United States.....	1	5,247	3,825	6,197	3,822	4,781.25	4,742
Total.....	5	35,360	22,986	36,749	23,108	28,732.50	11,229
East coast of United States to west coast of Canada:							
Norwegian.....	1	4,859	2,619	4,444	2,669	3,273.75	.....
United States.....	3	16,297	12,169	19,519	12,150	15,211.25	20,982
Total.....	4	21,156	14,788	23,963	14,819	18,485.00	20,982
Cristobal to west coast of United States:							
United States.....	4	9,504	7,344	12,528	7,374	7,792.39	1,084
Cristobal to west coast of Central America:							
British.....	4	3,763	3,216	5,959	3,365	4,020.00	2,427
Around the World:							
United States.....	2	18,429	12,589	21,020	12,589	15,736.25	7,443
East coast of South America to west coast of Canada:							
Norwegian.....	1	5,308	2,894	4,873	2,984	3,617.50	3,625
United States.....	1	5,049	3,545	5,603	3,547	4,431.25	5,640
Total.....	2	10,357	6,439	10,476	6,531	8,048.75	9,265
Cristobal to Balboa:							
German.....	1	1,041	517	1,153	556	646.25	.....
Panamanian.....	1	20	15	20	16	14.40	.....
Total.....	2	1,061	532	1,173	572	660.65	.....
East coast of United States to Hawaii:							
United States.....	1	1,740	1,542	2,647	1,542	1,927.50	1,857
East coast of United States to Philippine Islands:							
Panamanian.....	1	6,967	3,963	6,604	4,057	4,953.75	4,039
East coast of United States to Balboa:							
Norwegian.....	1	4,386	3,829	6,074	3,575	4,786.25	4,178
Canadian intercoastal:							
British.....	1	4,186	3,322	5,439	3,336	4,152.50	3,590
East coast of Canada to west coast of South America:							
British.....	1	7,711	6,391	11,404	6,254	5,551.92	.....
East coast of Canada to Australasia:							
British.....	1	4,172	3,286	5,454	3,340	4,107.50	3,928
East coast of Canada to Far East:							
Norwegian.....	1	972	878	1,376	778	1,097.50	650
West Indies to west coast of United States:							
Dutch.....	1	4,108	3,454	5,535	3,289	4,317.50	7,329
West Indies to west coast of South America:							
Japanese.....	1	4,400	4,357	5,864	4,259	3,267.75	.....
West Indies to Australasia:							
British.....	* 1					* 2,865.00	

* Naval vessel of 5,730 displacement tons.

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Europe to west coast of Central America:							
German.....	1	3,054	1,870	3,214	1,886	\$2,337.50	1,929
East coast of Central America to west coast of South America:							
Norwegian.....	1	1,192	1,062	1,655	943	1,327.50	2,101
East coast of South America to west coast of United States:							
United States.....	1	4,967	3,670	5,785	3,664	4,587.50	1,542
Egypt to west coast of United States:							
Norwegian.....	1	4,723	2,728	4,624	2,765	3,400.56	.....
Grand total, November, 1930.	232	1,148,859	841,183	1,398,460	847,512	970,646.33	554,098
Grand total, November, 1929.	271	1,326,585	992,754	1,644,234	994,462	1,133,093.79	810,890
Grand total, November, 1928.	275	1,340,040	1,010,176	1,652,246	1,010,593	1,144,261.24	780,752

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	73	403,467	304,042	491,734	305,959	\$380,052.50	560,398
West coast of Canada to Europe:							
British.....	27	138,967	96,700	157,072	96,604	120,859.45	203,757
Danish.....	1	5,256	2,207	6,636	4,236	5,258.75	8,909
Dutch.....	2	15,407	10,748	17,465	10,832	13,435.00	17,994
French.....	2	12,449	7,966	13,903	8,438	9,937.50	14,065
German.....	3	19,438	12,272	21,079	12,830	15,340.00	23,894
Italian.....	2	10,499	7,706	12,665	7,916	9,632.50	15,591
Norwegian.....	5	26,213	17,832	29,170	18,660	22,290.00	39,069
Swedish.....	2	11,018	6,836	11,112	8,471	8,545.00	14,151
United States.....	1	5,497	3,465	5,687	3,450	4,331.25	7,100
Total.....	45	244,774	167,732	274,789	171,437	209,649.45	344,530
West coast of South America to Europe:							
British.....	18	83,577	64,503	105,069	65,010	80,628.75	128,827
Danzig.....	1	6,310	5,346	8,940	5,050	6,682.50	11,324
Dutch.....	4	21,943	14,288	24,097	14,308	17,860.00	35,560
German.....	7	36,147	26,645	39,536	25,285	33,306.25	55,331
Greek.....	4	14,853	11,271	17,978	11,223	14,038.75	29,780
Italian.....	1	7,516	5,514	12,002	6,058	6,892.50	3,287
Spanish.....	2	5,188	4,477	6,910	4,230	5,596.25	10,500
Swedish.....	3	11,370	7,903	13,341	10,158	9,878.75	19,648
Yugoslav.....	1	4,188	3,310	5,150	3,281	4,137.50	7,660
Total.....	41	191,092	143,257	233,023	144,603	179,071.25	301,917
West coast of South America to east coast of United States:							
British.....	4	15,579	12,065	20,968	12,736	15,081.25	15,848
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	3,686
Danish.....	1	4,569	2,709	4,472	2,732	3,386.25	7,900
Swedish.....	1	4,421	3,743	15,339	4,377	4,678.75	22,144
United States.....	12	51,686	41,101	74,453	41,047	51,110.85	111,650
Total.....	19	80,927	63,051	122,542	64,868	78,548.35	161,228
West coast of United States to Europe:							
British.....	8	41,458	35,968	53,925	34,386	\$44,905.35	48,933
Danish.....	1	4,097	3,355	5,722	3,406	4,193.75	7,656
French.....	1	7,466	4,438	7,759	4,677	5,547.50	8,349
German.....	2	9,953	7,031	11,537	7,122	8,788.75	14,720
Japanese.....	2	7,812	5,966	9,634	5,509	7,457.50	13,430
Norwegian.....	2	10,584	8,951	14,943	8,924	11,188.75	19,976
United States.....	2	14,781	11,398	18,120	11,274	14,247.50	25,233
Total.....	18	96,151	77,107	121,690	75,298	96,329.10	138,297
West coast of South America to Cristobal:							
Colombian.....	5	881	856	1,285	858	900.20	499
Dutch.....	1	742	294	780	323	367.50	333
German.....	6	5,273	3,396	6,551	3,530	4,245.00	4,226
United States.....	1	2,606	1,350	2,434	1,349	1,637.50	523
Total.....	13	9,502	5,896	11,050	6,060	7,200.20	5,581

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Australasia to Europe:							
British.....	8	64,503	44,453	75,277	46,531	\$55,566.25	42,609
French.....	1	5,364	4,287	7,139	4,335	5,358.75	2,910
Total.....	9	69,867	48,740	82,416	50,866	60,925.00	45,519
Philippine Islands to east coast of United States:							
Danish.....	1	2,510	1,938	3,252	1,985	2,422.50	4,462
Japanese.....	2	11,430	8,724	13,960	8,571	10,905.00	13,808
Norwegian.....	1	7,075	4,009	6,751	4,115	5,011.25	4,118
United States.....	2	12,928	9,861	15,359	9,637	12,326.25	10,291
Total.....	6	33,943	24,532	39,322	24,308	30,665.00	32,679
West coast of United States to West Indies:							
British.....	1	4,797	4,348	7,402	4,277	5,435.00	8,855
Danish.....	1	5,695	4,728	7,691	4,713	5,910.00	10,720
Norwegian.....	1	5,531	4,682	7,614	4,563	5,852.50	11,174
Total.....	3	16,023	13,758	22,707	13,553	17,197.50	30,749
West coast of Canada to east coast of United States:							
Danish.....	1	5,064	2,750	4,732	2,865	3,437.50	7,111
Norwegian.....	1	4,273	2,616	4,414	2,668	3,270.00	6,600
United States.....	1	4,870	3,408	5,521	3,398	4,260.00	7,564
Total.....	3	14,207	8,774	14,667	8,931	10,967.50	21,275
Hawaii to east coast of United States:							
United States.....	2	8,539	6,125	10,071	6,153	7,656.25	16,003
Australasia to east coast of United States:							
British.....	1	5,210	3,083	5,066	3,079	3,853.75	8,300
Norwegian.....	1	4,534	2,465	4,114	2,453	3,081.25	6,851
Total.....	2	9,744	5,548	9,180	5,532	6,935.00	15,151
Far East to east coast of United States:							
Japanese.....	2	13,049	10,389	16,964	10,240	12,986.25	4,842
Australasia to east coast of Canada:							
British.....	2	8,516	6,534	10,862	6,602	8,167.50	6,496
West coast of United States to Cristobal:							
United States.....	2	4,569	4,104	6,891	4,141	5,076.95	1,091
West coast of Central America to Cristobal:							
British.....	2	2,322	1,930	3,662	2,061	2,412.50	486
Foreign vessels in ballast—United States inter-coastal:							
Panamanian.....	1	242	210	592	213	174.24	.....
West coast of South America to east coast of Canada:							
British.....	1	7,711	6,391	11,404	6,254	7,988.75	15,860
West coast of Central America to Europe:							
German.....	1	3,272	2,565	4,165	2,547	2,355.84	.....
Balboa to Cristobal:							
Panamanian.....	1	20	15	20	16	14.40	.....
Far East to Europe:							
British.....	1	4,691	2,670	4,359	2,638	3,337.50	7,000
Grand total, November, 1930.	247	1,222,628	903,370	1,492,110	912,280	1,127,711.03	1,709,102
Grand total, November, 1929.	254	1,172,321	890,898	1,471,806	892,539	1,111,802.15	1,723,741
Grand total, November, 1928.	252	1,128,257	866,882	1,426,332	872,177	1,081,676.24	1,720,878

Cable Address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pan canal, Panama;" in the United States, "Pan canal, Washington."

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., December 9, 1930.

No. 820.

Colombia, Atlantic coast, lights extinguished. The Master of the French S. S. *Perou* reports the following lights extinguished on December 7, 1930:

1. *Galera de Zamba Point light.* Approximate position: Latitude 10° 48' 25" N., longitude 75° 19' 45" W.

2. *Cartagena Harbor.* The light on the south side of the entrance to Cartagena Harbor and the buoy north of Castillo Grande Point were also extinguished.

J. L. SCHLEY,
Acting Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending December 6, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Colombo	Italian S. S. Line		December 1		564
Darien	Leyland S. S. Line		December 2		77½
Ecuador	Panama Mail S. S. Co.	December 1	December 3	290	674
Tolosa	United Fruit Co.	December 1	December 3	409	18
Guayaquil	Panama R. R. S. S. Line	December 2	December 2	204	95
Pacific Exporter	Furness, Withy & Co.	December 2	December 3	(*)	110
Acajutla	Pacific Steam Nav. Co.	December 2	December 6	210	591
Eleanor Christenson	Arrow S. S. Line	December 3	December 3	116	(*)
Sanyo Maru	Osaka Shosen Kaisha	December 3	December 3	155	164
Tivives	United Fruit Co.	December 3	December 4	221	561
Ancon	Panama R. R. S. S. Line	December 3	December 3	2,717	
Guatemala	Panama Mail S. S. Co.	December 3	December 4	769	141
Tela	United Fruit Co.	December 3	December 4	906	59
Alda	North German Lloyd	December 3	December 4	62	83
Nevada	French Line	December 3	December 4	18	100
Seattle	Hamburg-American Line	December 4	December 4	236	416
Mississippi	French Line	December 4	December 4	99	(*)
Davision	Leyland S. S. Line	December 4	December 5	367	(*)
Fidello	Aluminium Line	December 4	December 5	1,165	71
Swiftsure	C. D. Mallory & Co.	December 4	December 5	10,562	(*)
Oroya	Pacific Steam Navigation Co.	December 4	December 5	63	290
Caprera	Italian S. S. Line	December 4	December 6	346	29
Jefferson Myers	Pacific-Atlantic S. S. Co.	December 5	December 5	155	(*)
Cefalu	Standard Fruit & S. S. Co.	December 5	December 5	112	533
Cerigo	Hamburg-American Line	December 5	December 5	635	
Baralt	Royal Netherlands S. S. Co.	December 5	December 5	626	
Bogota	Colombian S. S. Line	December 5	December 6	143	504½
Suriname	United Fruit Co.	December 5	December 6	802	(*)
Santa Inez	Grace Line	December 5	December 6	107	786
Arana	Pacific Steam Navigation Co.	December 6	December 6	261	183
Tela	United Fruit Co.	December 6	December 6	387	143
Kreta	Hamburg-American Line	December 6	December 6	490	
Dora K.	R. Feuillebois	December 6	December 6	(*)	13
Santa Barbara	Grace Line	December 6	December 6	3	

* No cargo discharged. * No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending December 13, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Santa Inez	Grace Line	December 6	December 6	(*)	
Santa Barbara	Grace Line	December 6	December 6	26	
Nora	Arrow Oil Co.	December 7	December 8	13,400	
Kreta	Hamburg-American Line	December 7	December 7	177	
Lisbon Maru	Nippon Yusen Kaisha	December 8	December 8	102	
Santa Rita	Grace Line	December 8	December 8	5	1
Defiance	Roosevelt S. S. Co., S. B.	December 9	December 9	306	
Barnevelt	Royal Netherlands S. S. Co.	December 9	December 9	158	
Vinland	Scandinavian-South Pacific Line	December 10	December 11	127	
Santa Maria	Grace Line	December 11	December 11	21	18
U. S. S. Nitro	U. S. Navy	December 11	December 12	8	
Virginia	Panama-Pacific Line	December 12	December 12		182
Cauca	National Navigation Co.	December 12	December 13	23	35

* 38 tons and 1 automobile.

Lines Add Extra Tonnage for Heavy Fruit Movement from Pacific Northwest.

Referring to item "Fruit Shipments from Pacific Northwest," published in THE PANAMA CANAL RECORD of December 3, 1930, the Hamburg-American Line advise that its company, in conjunction with the North German Lloyd, has scheduled six sailings in addition to their regular 10-day schedule between Europe and the west coast of North America, to take care of the heavy movement of fresh fruit. The additional vessels which will be placed in this service are the steamers *Bitterfield*, *Witram*, *Justin* and *Witell*, the two former making two sailings each. These vessels are expected to load to capacity, chiefly with boxes of apples.

The Donaldson Line, also operating in the Europe-North Pacific coast service, have also placed two extra carriers, the *Corrientes* and *Cortona*, in this service to meet the heavy demand for fresh fruit space.

Two extra carriers, the *Elstree Grange* and *Canonesa*, have been added by the Furness Line to its European-North Pacific coast service to participate in this traffic; while Shaw, Savill & Albion, Ltd., have routed the steamer *Maimoa* to this service for the carriage of fresh fruit.

Notaries Public in the Canal Zone.

The following is a list of notaries public commissioned in the Canal Zone as of December 10, 1930. The list gives, by towns, the names, where stationed, and the date of expiration of commission:

ANCON.

Boyd, Oscar S., Municipal Division, July 30, 1931.
 French, A. W., Gorgas Hospital, May 14, 1932.
 McDougall, J. B., District Attorney, March 29, 1932.
 Norris, R. N., Municipal Division, August 11, 1933.
 Sheibley, F. H., District Court, October 27, 1932.
 Walker, James J., District Court, November 22, 1931.

BALBOA.

Hyde, W. H., Port Captain, March 6, 1933.
 Illwitzer, P. G., Balboa Storehouse, October 12, 1932.
 Kalar, J. D., Port Captain, April 13, 1932.
 Kelley, Thomas H., Mechanical Division, August 18, 1933.
 Lefever, John E., Fort Amador, February 28, 1931.
 Prager, J. F., Balboa Storehouse, December 13, 1932.
 Smith, Walter R., Balboa Storehouse, September 4, 1931.
 Stillwell, J. L., Fort Amador, April 20, 1931.

BALBOA HEIGHTS.

Attaway, E. F., Administration Building, Room 316, October 28, 1933.
 Boggs, W. B., Administration Building, Room 262, August 4, 1931.
 Buehler, G. H., Administration Building, Room 205, August 17, 1931.
 Fenton, John A., Administration Building, Room 203, July 28, 1933.
 Schecker, C. A., Administration Building, Basement, January 19, 1933.
 Sims, Walter H., Quarry Heights, December 1, 1933.
 Taylor, R. G., Administration Building, Room 318, April 30, 1933.
 Ungar, J., Administration Building, Room 301, February 2, 1932.
 Wang, Frank H., Administration Building, Room 305, April 29, 1932.
 Barnes, J. O., Administration Building, Room 264, October 17, 1932.
 Uhler, H. L., Administration Building, Room 310, January 12, 1933.

COROZAL.

Daniels, W. L., Corozal, June 23, 1932.
 Fisher, Miss Bernice S., Panama Ordnance Depot, May 2, 1932.
 Grimm, G. L., Corozal Hospital, October 8, 1932.
 West, Charles E., Albrook Field, July 23, 1933.

CRISTOBAL-MOUNT HOPE.

Agnew, Harold A., United Fruit Co., September 4, 1932.
 Campbell, J. S., District Court, January 28, 1932.
 Clarke, V. J., Commissary Division, January 14, 1932.
 Ellis, Edward E., Coaling Plant, May 24, 1933.
 Flood, Arthur, Customs Office, November 15, 1931.
 Fuller, Mrs. Maude W., Coco Solo, December 9, 1933.
 MacSparren, E. S., Receiving and Forwarding Agency, December 5, 1933.
 Murray, P. E., Magistrate, October 13, 1932.
 Raymond, J. G., Commissary Division, January 3, 1932.
 Scarborough, W. W., Clubhouse, January 21, 1933.
 Slocum, E. L., Chase National Bank, January 29, 1933.
 Walsh, M. H., Customs Office, August 5, 1932.
 Ward, Mrs. Marie L., Receiving and Forwarding Agency, August 2, 1932.
 Gates, R. E., Commissary Division, June 12, 1932.

GATUN.

Malone, P. L., Railroad Station, November 23, 1931.
 Cotton, Arthur E., Clubhouse (gold), May 16, 1933.

PARAISO.

Holzappel, A. F., Dredging Division, September 30, 1932.
 Kimble, W. I., Dredging Division, July 25, 1932.

PEDRO MIGUEL.

Behlen, Ernest, Storehouse, January 23, 1932.
 Cauthers, R. A., Municipal Division, June 16, 1933.
 Rader, T. C., Pacific Locks, January 30, 1933.
 Wright, A. M., Dredging Division, February 2, 1933.

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., December 24, 1930. No. 21.

Holiday Greetings.

In the absence of Governor Burgess, it gives me great pleasure to extend to the personnel of The Panama Canal and the Panama Railroad Company, to the patrons and friends of the Canal, and to the people of the Republic of Panama sincere good wishes for a merry Christmas and a happy and prosperous New Year.

I take this opportunity of expressing the appreciation of the Panama Canal administration for the loyalty and cooperation of our employees and the good will of our patrons throughout the year now drawing to a close.

J. L. SCHLEY,
Acting Governor, The Panama Canal.
2d Vice President, Panama Railroad.

CANAL WORK IN NOVEMBER, 1930.

The following is the report of the Acting Governor to the Secretary of War, of Canal work in the month of November, 1930.

BALBOA HEIGHTS, C. Z., December 13, 1930.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of November, 1930:

NUMBER OF TRANSITS.

During the month 479 commercial vessels and 4 small nonseagoing launches under 20 tons transited the Canal. In addition to these there were 40 vessels belonging to the United States Government, 1 transit of a Panamanian Government vessel, and 3 transits of vessels solely for repairs, on which no tolls were collected, making a total of 527 transits for the month, or a daily average of 17.56.

Tolls on the commercial vessels amounted to \$2,098,357.36, and on the launches to \$20.22, a total of \$2,098,377.58, or a daily average on all traffic of \$69,945.92.

In comparison with October, 1930, traffic for the past month decreased 7.3 per cent in transits and 8.3 per cent in tolls collected. Practically all of the decline was in the traffic from the Atlantic to the Pacific. Pacific to Atlantic traffic was only slightly less than that for the previous month owing to the heavy seasonal movement of several large commodities, particularly food products, from the Pacific area. In comparison with November, 1929, traffic for the past month decreased 8.8 per cent in transits and 6.5 per cent in tolls. In comparison with the first 11 months of the calendar year 1929, the corresponding period this year shows a decrease of 518 transits and \$1,330,243.85 in tolls, or 8.8 per cent and 5.3 per cent, respectively.

The total numbers of craft of all kinds transiting the Canal during the month of November in 1930 and in the two preceding years are shown in the following tabulation:

	November, 1928.	November, 1929.	November, 1930.
Commercial vessels	527	525	479
Launches (under 20 tons)	5	4	4
Noncommercial vessels:			
United States Government	29	40	40
Panamanian Government vessels	2	2	1
Vessels for repairs	1	3	3
Total	564	574	527

In addition to the vessels listed above, Panama Canal floating equipment consisting of dredges, tugs, barges, launches, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun	8	9	17
Pedro Miguel	16	19	35
Miraflores	16	19	35
Total	40	47	87

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the calendar year to the end of November in 1929 and 1930:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929.	1930.	1929.	1930.	1929.	1930.	1929.	1930.
January ...	603	531	2,771,280	2,601,628	2,858,835	2,611,632	\$2,502,815.12	\$2,360,211.24
February ...	522	491	2,428,530	2,369,255	2,550,498	2,377,900	2,211,961.20	2,131,386.12
March ...	536	515	2,567,961	2,505,559	2,743,768	2,558,238	2,343,865.55	2,260,002.36
April ...	540	489	2,483,176	2,479,096	2,719,668	2,456,782	2,281,087.27	2,232,763.00
May ...	524	479	2,496,905	2,418,633	2,536,839	2,261,616	2,296,546.57	2,162,898.60
June ...	503	478	2,352,431	2,358,237	2,424,002	2,147,181	2,127,805.97	2,100,994.53
July ...	527	488	2,468,280	2,433,895	2,598,162	2,402,047	2,259,582.37	2,180,511.82
August ...	541	465	2,558,739	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
September ...	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.58
October ...	564	517	2,747,949	2,584,160	2,845,643	2,394,410	2,485,897.71	2,288,982.08
November ...	525	479	2,498,906	2,371,487	2,534,631	2,263,200	2,244,895.94	2,098,457.36
Total	5,908	5,390	27,804,418	26,787,247	28,925,559	25,631,057	25,283,684.96	23,953,441.11

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these Governments, and vessels transiting solely for repairs, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for November in the years 1928, 1929, and 1930, and comparison with the monthly averages for the fiscal year 1930:

	November, 1928.	November, 1929.	November, 1930.	Average per month for fiscal year 1930.
Number of vessels	527	525	479	515
Panama Canal net tonnage	2,468,297	2,498,906	2,371,487	2,498,385
United States net tonnage	1,877,058	1,883,652	1,744,553	1,890,255
Registered gross tonnage	3,078,578	3,116,040	2,890,570	3,119,221
Registered net tonnage	1,882,770	1,887,001	1,759,792	1,899,802
Tolls	\$2,225,937.48	\$2,244,895.94	\$2,098,357.36	\$2,256,407.50
Tons of cargo carried	2,501,630	2,534,631	2,263,200	2,502,519

The average daily number of transits, tonnage, tolls, and cargo are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for fiscal year 1930.
	November, 1928.	November, 1929.	November, 1930.	
Number of transits	17.57	17.50	15.96	16.95
Panama Canal net tonnage	82,276	83,297	79,050	82,139
Tolls	\$74,197.91	\$74,829.86	\$69,945.25	\$74,183.26
Tons of cargo carried	83,387	84,488	75,440	82,275

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of November in 1928, 1929, and 1930, are shown in the following tabulation:

	Average per vessel.		
	November, 1928.	November, 1929.	November, 1930.
Panama Canal net tonnage.....	4,683	4,760	4,951
United States net tonnage.....	3,562	3,588	3,642
Registered gross tonnage.....	5,842	5,935	6,035
Registered net tonnage.....	3,573	3,594	3,674
Tolls.....	\$4,223.79	\$4,275.99	\$4,380.70
Tons of cargo (including vessels in ballast).....	4,747	4,828	4,725
Tons of cargo (laden vessels only).....	5,698	5,633	5,507

NATIONALITY OF VESSELS.

Seventeen nationalities were represented in the commercial traffic passing through the Canal in November, 1930. Vessels of United States registry, with 196, led in the number of transits, while those flying the British flag, with 133, were second. Vessels of these two nationalities made up over 68 per cent of the total transits for the month. Germany and Norway were next with 37 and 28, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo carried through the Canal during the month of November, 1930, was 2,263,200 tons. Cargo from the Atlantic to the Pacific aggregated 554,098 tons, as compared with 649,853 tons in October, 1930, and 810,890 tons in November, 1929.

From the Atlantic to the Pacific various manufactured goods, totaling 166,172 tons, constituted the heaviest item of cargo, followed by mineral oils with 39,342 tons, cotton with 25,819 tons, cement with 24,885 tons, and phosphates with 21,451 tons. There was a decrease of 256,792 tons, or 31.7 per cent, in cargo in this direction as compared with November, 1929, owing to a general decline in the shipments of practically all of the important commodities usually routed in this direction.

From the Pacific to the Atlantic mineral oil shipments totaling 408,065 tons constituted the heaviest item, followed by nitrates with 226,197 tons, wheat with 221,309 tons, lumber with 195,273 tons, and ores (principally iron) with 137,429 tons. There was a decrease of 14,639 tons, or 0.85 per cent, in cargo in this direction as compared with November, 1929. Mineral oil shipments declined 77,518 tons, or 16 per cent; lumber, 71,721 tons, or 26.9 per cent; and ores, 46,238 tons, or 25.2 per cent. Nitrates and wheat increased, respectively, 14,643 tons, or 6.9 per cent, and 99,325 tons, or 81.4 per cent, in comparison with the corresponding month in the preceding year.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton, nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.907 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.720 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of November, 1930, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
British.....	* \$623,429.51	* \$674,127.80	\$50,698.29	
Chilean.....	12,837.50	15,534.00	2,696.50	
Colombian.....	1,709.50	1,493.20		\$274.30
Danish.....	40,637.50	47,518.00	6,880.50	
Danzig.....	11,093.94	9,986.20		1,107.74
Dutch.....	61,538.75	71,867.00	10,328.25	
French.....	35,878.75	43,217.00	7,338.25	
German.....	114,079.04	130,973.80	16,894.76	
Greek.....	14,038.75	14,853.00	764.25	
Italian.....	22,656.25	24,512.00	1,855.75	
Japanese.....	55,632.75	54,393.00		1,239.75
Norwegian.....	111,633.08	121,038.80	9,385.72	
Panamanian.....	5,156.79	7,136.20	1,979.41	
Spanish.....	5,596.25	5,188.00		408.25
Swedish.....	43,576.40	43,997.00	5,420.60	
United States.....	931,631.35	975,316.00	43,684.65	
Yugoslav.....	7,031.25	7,476.00	394.75	
Total.....	2,098,357.36	2,253,634.00	158,301.68	3,025.04
Net increase for all traffic.....			155,276.64	

* Includes \$2,865 collected for naval vessel at \$0.50 per displacement ton.

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$28,607.19
United States foreign trade.....	15,728.60
United States—Canal Zone trade.....	* 651.14
Total.....	43,684.65

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in November, 1930, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included.

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
British.....	.53	1.29	.99
Chilean.....	.32	.79	.46
Colombian.....	1.26	.87	1.09
Danish.....	.67	1.72	1.27
Danzig.....		1.79	1.79
Dutch.....	.62	1.41	1.04
French.....	.55	1.00	.82
German.....	.59	1.39	1.04
Greek.....		2.00	2.00
Italian.....	.19	1.05	.82
Japanese.....	1.18	.99	1.06
Norwegian.....	.68	1.51	1.18
Panamanian.....	.58		.58
Spanish.....		2.02	2.02
Swedish.....	1.14	2.09	1.76
United States.....	.71	1.45	1.13
Yugoslav.....	1.48	1.83	1.68
Averages, November, 1930.....	.65	1.40	1.09
Averages, November, 1929.....	.84	1.49	1.20
Averages, November, 1928.....	.85	1.53	1.22

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of November is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	6	28,605	\$27,374.60	43	238,501	\$238,306.60
Ballast.....	34	190,199	137,013.42			
General cargo ships:						
Laden.....	165	822,263	725,831.80	199	980,223	886,590.25
Ballast.....	24	107,591	77,485.19	3	3,637	2,625.54
Noncargo-carrying ships:						
Naval.....	1		2,865.00			
Yachts.....	2	105	76.32	2	262	188.64
Total.....	232	1,148,859	970,646.33	247	1,222,623	1,127,711.03
Method of propulsion:						
Steam.....	165	811,092	709,434.14	189	937,362	868,554.89
Motor.....	66	337,681	261,150.27	58	285,266	259,156.14
Motor schooner.....	1	86	61.92			
Total.....	232	1,148,859	970,646.33	247	1,222,623	1,127,711.03

Of the 354 steam-driven vessels, 242 were oil burning, 104 coal burning, and 8 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of November, 1930. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Cruisers.....	1	* 8,900	\$4,450.00	1	* 8,150	\$4,075.00
Destroyers.....				4	* 4,616	2,308.00
Gunboats.....	1	* 1,575	787.50	1	* 1,575	787.50
Minesweepers.....	3	* 2,850	1,425.00	2	* 1,900	950.00
Submarines.....	8	* 6,898	3,449.00	5	* 4,380	2,190.00
Submarine tenders.....	1	* 2,360	2,950.00			
Supply ships.....	1	* 3,424	4,292.50			
Tankers.....	2	* 11,693	8,418.96	1	* 5,063	6,328.75
Transports.....	1	* 3,908	4,885.00			
Tugs.....	1	* 1,000	500.00	1	* 1,000	500.00
U. S. Army vessels:						
Mineplanters.....	1	* 1,208	604.00			
Transports.....	2	* 7,343	9,173.75	2	* 7,816	9,770.00
Treasury Department vessels:						
Coast Guard cutter.....				1	* 1,572	786.00
Total, U. S. Government.....	22		40,940.71	18		27,695.25
Panamanian Government vessels:						
Yachts.....				1	* 20	15.00
Vessels for repairs:						
Tankers.....	2	* 4,611	3,458.25	1	* 1,636	1,227.00
Grand total.....	24		44,398.96	20		28,937.25

* Indicates displacement tonnage. † Indicates Panama Canal net tonnage. ‡ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of November, 1930, carried cargo as follows: Atlantic to Pacific, 4,051 tons; Pacific to Atlantic, 3,149 tons; total, 7,200 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of November, 1930. These launches, although paying tolls, are excepted from statements concerning commercial traffic.

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	2	19	\$15.15
Pacific to Atlantic.....	2	7	5.07
Total.....	4	26	20.22

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of November, 1930, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	44,426	20,766	65,192
Local cargo shipped..... tons..	7,446	1,398	8,844
Transit cargo arriving..... tons..	2,251,064	2,223,064	4,474,128
Transit cargo clearing..... tons..	2,248,873	2,257,018	4,505,891
Cargo received for transshipment..... tons..	21,163	2,638	23,801
Cargo transhipped..... tons..	22,156	1,632	23,788
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	115	38	153
Number of releases issued.....	621	211	832
Tons received.....	2,204	728	2,932
Tons withdrawn.....	1,971	668	2,639
Packages received.....	5,782	4,819	10,601
Packages withdrawn.....	6,393	3,843	10,236
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	40	3	43
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons..	12,150	464	12,614
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	126	9	135
U. S. Army, including vessels..... tons..		2	2
Individuals and companies..... tons..	111		111
Panama Railroad Company..... tons..	8		8
Transferred to Navy..... tons..	475		475
Total sales and issues..... tons..	12,870	475	13,345
Coal on hand, November 1, 1930..... tons..	68,081		68,081
Coal on hand, December 1, 1930..... tons..	55,211		55,211
Coal received from Navy..... tons..		475	475
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls..	7,408.30	13,549.27	20,957.57
Panama Railroad Company..... bbls..	868.43	471.36	1,339.79
U. S. Army and Navy..... bbls..		600.47	600.47
U. S. Department of Commerce..... bbls..	680.80		680.80
Individuals and companies..... bbls..		365.62	365.62
Total sales and issues..... bbls..	8,957.53	14,986.72	23,944.25
Fuel oil on hand, December 1, 1930..... bbls..	39,456.33	45,399.86	84,856.19
Diesel oil sold during November, 1930..... bbls..		1,682.89	1,682.89
Diesel oil on hand, December 1, 1930..... bbls..	1,083.28	9,152.41	10,235.69
Miscellaneous transfers..... bbls..		598.64	598.64
Gasoline and kerosene pumped for the Panama Canal..... bbls..	7,726.91	11,286.19	19,013.10
Gasoline pumped for individuals and companies..... bbls..	9,473.19	42,464.95	51,938.14
Oil pumped for individuals and companies:			
Receipts..... bbls..	197,354.94	55,257.00	252,611.94
Issues..... bbls..	209,042.22	209,601.72	418,643.94
Oil pumped for U. S. Navy..... bbls..	20,050.00	35,875.40	55,925.40
Total fuel oil, gasoline and kerosene handled..... bbls..	452,604.79	371,753.51	824,358.30
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	16	8	24
Measured for Panama Canal net tonnage.....	1	2	3
Remeasured for Panama Canal net tonnage.....	14	4	18
Panama Canal net tonnage corrected.....	3	1	4
U. S. equivalent tonnage corrected.....	3	8	11
Services of harbor equipment:			
Tugs, total operating hours.....	419 ³ / ₄	312 ³ / ₄	732 ³ / ₄
Launches, total operating hours.....	1,316 ³ / ₄	1,444 ³ / ₄	2,761
Revenue from tug service, pilotages, etc.:			
Tug revenue.....	\$14,117.50	\$9,983.75	\$24,101.25
Pilotage.....	13,644.00	8,963.00	22,607.00
Seamen.....	10,643.00	11,448.00	22,091.00
Launch service.....	2,023.50	2,843.00	4,866.50
Wharfage.....	14,346.20	6,403.28	20,749.43
Ships measured.....	50.00	50.00	100.00
Miscellaneous.....	378.95	320.00	698.95

	Cristobal.	Balboa.	Total.
Ships repaired at Panama Canal shops:			
Commercial.....	60	11	71
U. S. Army and Navy.....	6	6	12
Panama Canal equipment.....	9	10	19
Total.....	75	27	102
Vessels dry-docked:			
Commercial.....	5	4	9
U. S. Army and Navy.....	2	2	4
Panama Canal equipment.....	2	1	3
Total.....	9	7	16
Clearances issued.....	316	237	553
Bills of health issued.....	265	246	511

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal..	536	3,279,104	1,994,127	508	3,027,575	1,846,077
Vessels entering port but not transiting Canal.	69	361,667	216,383	8	33,741	19,337
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	125	804,317	485,244	102	666,762	398,933
<i>Ships clearing.</i>						
All vessels, including those transiting Canal..	546	3,321,992	2,020,762	515	3,062,565	1,869,163
Vessels clearing port but not transiting Canal.	72	338,499	232,976	9	41,755	25,407
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	131	812,453	490,672	104	679,800	406,295

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	1,085	661	1,746	99	95	194
From Pacific ports.....	132	136	268	234	272	506
Total disembarking.....	1,217	797	2,014	333	367	700
Embarking:						
For Atlantic ports.....	815	985	1,800	39	88	127
For Pacific ports.....	201	136	337	263	315	578
Total embarking.....	1,016	1,121	2,137	302	403	705
Remaining on board:						
From Atlantic to Pacific ports.....	1,732	2,805	4,537	1,939	3,160	5,099
From Pacific to Atlantic ports.....	784	862	1,646	976	1,061	2,037
From Atlantic to Atlantic ports.....	442	118	560	.....	.....	.....
From Pacific to Pacific ports.....	.....	.....	.....	26	156	182
Total remaining on board.....	2,958	3,785	6,743	2,941	4,377	7,318
Total arriving.....	4,175	4,582	8,757	3,274	4,744	8,018
Total departing.....	3,974	4,006	8,880	3,243	4,780	8,023

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	232	57	24.6
Pacific to Atlantic.....	247	62	25.1
Total.....	479	119	24.8

In addition to the aforesaid, 54 passenger-carrying vessels called at the port of Cristobal and 4 at Balboa without transiting the Canal, making a total of 177 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of November, 1930, 44 commercial airplanes entered and 41 cleared at the port of Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of November, 1930, together with the total sales in the corresponding month in 1929 and 1928:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels.....	\$1,950.08	\$10,659.11	\$23,884.34	\$256.00	\$6,855.40	\$43,604.93
Government vessels.....	356.42	1,355.42	8,019.98	74.21	1,392.90	11,198.93
P. R. R. vessels.....	2.40	132.30	957.40	789.40	177.05	2,058.55
Totalsales, November, 1930.	2,308.90	12,146.83	32,861.72	1,119.61	8,425.35	56,862.41
Totalsales, November, 1929.	2,803.65	15,164.58	37,146.00	975.01	7,775.32	63,864.56
Totalsales, November, 1928.	3,067.30	15,982.62	45,069.98	1,332.17	8,134.37	73,586.44
Sales at Balboa to:						
Commercial vessels.....	477.70	3,534.72	13,220.79	582.96	10,366.24	28,182.41
Government vessels.....	215.30	1,288.89	10,113.17	390.58	3,013.57	15,021.51
P. R. R. vessels.....				11.84		11.84
Totalsales, November, 1930.	693.00	4,823.61	23,333.96	955.38	13,379.81	43,215.76
Totalsales, November, 1929.	1,471.24	12,520.94	32,609.05	692.58	6,553.89	53,847.70
Totalsales, November, 1928.	1,537.63	11,644.95	19,267.52	720.79	13,717.25	46,938.14

The aggregate sales to Government vessels during the month was \$26,220.44; to Panama Railroad vessels, \$2,070.39; and to other commercial vessels, \$71,787.34, making the total sales to all vessels, \$100,078.71.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of November, 1930, as compared with the corresponding month in 1929 and 1928:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial.*			Nov., 1928.	Nov., 1929.	Nov., 1930.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	240	217	457	10	14	24	517	516	481
Pedro Miguel.....	242	219	461	13	24	37	545	541	498
Miraflores.....	243	218	461	13	23	36	544	539	497
Number of vessels put through locks.									
Gatun.....	249	231	480	30	36	66	576	623	546
Pedro Miguel.....	246	229	475	41	51	92	627	617	567
Miraflores.....	246	229	475	41	52	93	629	619	568

* Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	41	48	48
Panama Canal equipment.....	17	35	35
Launches (under 20 tons).....	5	4	5
Panamanian Government vessels.....		2	2
Vessels for repairs.....	3	3	3

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in November, 1930, as compared with the preceding month and the corresponding month in 1929:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	2,016,500,000	1,665,150,000	1,513,080,000
Maintenance.....	16,280,000		
Leakage.....	40,000,000	20,000,000	20,000,000
Total, November, 1930.....	2,072,780,000	1,685,150,000	1,533,080,000
Total, October, 1930.....	2,242,780,000	1,805,920,000	1,598,640,000
Total, November, 1929.....	2,210,660,000	1,782,170,000	1,648,410,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of November, 1930, are shown in comparative form in the following tabulation:

	November.		November—Years of record.		
	1930.	1929.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Discharge of Chagres River at Alhajuela.....	3,500	3,629	11,300	2,267	4,515
Maximum momentary discharge for the month.....	33,540	20,780	78,900		
Gatun Lake watershed, total yield.....	8,987	11,186	24,488	8,673	13,154
Gatun Lake watershed, net yield.....	8,386	10,624	23,950	7,995	12,638
Draft on Gatun Lake for lockages and power.....	¹ 2,941	3,022	3,022	² 1,066	² 2,367

¹ November 19, 1909.

² 1914 excluded.

³ Full power load.

The monthly mean discharge of the Chagres River at Alhajuela for November, 1930, was 3,500 c. f. s., which is 22 per cent below the 29-year average of 4,515 c. f. s. The maximum monthly mean discharge on record for November is 11,300 c. f. s. in 1909, and the minimum is 2,267 c. f. s. in 1905. Two rises of five feet or more at Alhajuela occurred during the month. The maximum momentary discharge for the month was 33,540 c. f. s. on the 29th, and the minimum was 1,478 c. f. s. at elevation 92.69 feet on the 25th. The maximum momentary discharge on record for November is 78,900 c. f. s. at elevation 111.40 on November 19, 1909, and the minimum is 1,356 c. f. s. at elevation 92.26 feet on November 30, 1918.

Gatun Lake varied in elevation during November from a minimum of 86.46 feet on the first, to a maximum of 87.16 feet on the 20th, averaging 86.91 feet. The elevation at midnight on October 31st was 86.50 feet and at midnight on November 30th, 86.84 feet, showing a net rise during the month of thirty-four hundredths of a foot. The total yield of Gatun Lake watershed was 8,987 c. f. s., which is 32 per cent below the 17-year November average of 13,154 c. f. s., and the second lowest during the 17-year period. The maximum total yield for November is 24,488 c. f. s. in 1917. Miraflores Lake varied between elevations 54.54 feet on the 16th and 52.89 feet on the 29th. The mean elevation for the month was 53.81 feet and at midnight on the 30th it was 53.74 feet.

SEISMOLOGY.

One seismic disturbance was recorded during the month, on the 21st.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month of November, 1930, was 5,207,100 kilowatt hours, and the computed water consumption was 3,925,621,835 cubic feet. Continuous service was maintained at this station throughout the month. The Miraflores Diesel-electric station had a gross generator output of 9,800 kilowatt hours, and the fuel oil consumption was 32.74 barrels. This station was operated only for peak-load service during the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 41 vessels during the month. There were 406 work orders issued during the month, as compared with 494 issued during the previous month.

MECHANICAL DIVISION.

During the month of November, 1930, miscellaneous repairs were made on 75 vessels at Cristobal and 27 at Balboa. Nine vessels were dry-docked at Cristobal and 7 at Balboa. Work was completed on the U. S. S. *Salinas*, which was at Balboa

docks for repairs to boilers and other minor repairs. Work on the United States Navy's submarine *S-16* was completed during the month, and the repairs on the submarine *S-17* were carried forward. The general overhaul of the tug *Sciota* was completed during the month.

MUNICIPAL ENGINEERING DIVISION.

On the Thatcher Highway under construction from the west bank of the Canal opposite Balboa to the Zone boundary near Arraijan, 1,820 cubic yards were excavated and one double 24-inch culvert was placed. Due to wet weather, work on this project was reduced to a minimum in October last.

Miscellaneous municipal engineering work around the Naval Air Station, Coco Solo, consisting of excavating, grading, pipe laying, curbing, etc., was performed during November.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 730,015,575 gallons.

DREDGING DIVISION.

The general movement along the waterfront of West Culebra slide continued during the month with an average advance of 2.2 feet toward the Canal between stations 1770-00 and 1777-00 W. The reference points on this slide also showed a slight movement. A dredge worked for 8 days on this slide between stations 1779-00 and 1795-00 W., excavating 31,900 cubic yards. Slight surface movements occurred on South Cucaracha and Cucaracha Signal Station slides during the month. A few new bank breaks also occurred during the month throughout the Cut. There was no interference to shipping on account of slides during the month.

The total excavation during November, 1930, was 686,875 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
Work excavation:	<i>Cubic yds.</i>	<i>Cubic yds.</i>	<i>Cubic yds.</i>
Canal prism, Gaillard Cut—			
South Cucaracha slide.....	4,300	10,000	14,300
Cucaracha Signal Station slide.....	2,400	14,000	16,400
West Culebra slide.....	7,200	24,700	31,900
Project No. 3.....	1,000	20,900	21,900
Canal prism, Pacific entrance—			
Project No. 1.....		35,550	35,550
Maintenance.....	5,000	1,500	6,500
Balboa inner harbor—			
Project No. 1, extension No. 1.....	12,500	18,800	31,300
Maintenance.....	425,000		425,000
Plant excavation:			
Colon fill.....	102,000		102,000
Dredging sand at Chame.....	2,025		2,025
Total.....	561,425	125,450	686,875

The ferry operating at the north end of Pedro Miguel locks functioned 30 days during the month. One thousand three hundred and twenty single trips were made, and 114 Panama Canal, 51 U. S. Army, and 4,960 other vehicles, a total of 5,125, ferried across the Canal.

MADDEN DAM PROJECT.

The geological investigations were carried on intensively. Two hundred and seventy-five linear feet of drilling with diamond and shot drills were completed during the month. Compression tests were made at Miraflores laboratory of specimen cores from shot drill hole N-10 and from Haystellite bit holes T-5 and T-6 (weathering test). The report of test of specimen cores from shot drill holes N-3 and N-4 by the Materials Testing Laboratory, University of Illinois, the second series of three dimensional compression tests, was received on November 1st. Apparatus for test of compressive strength of rock in place was assembled and test was under way at the end of month. Observations of water table in drill holes were made weekly by the Section of Surveys and piezometric elevations were tabulated and plotted. Samples of Chagres River water were taken daily and forwarded to Miraflores laboratory from which two reports were received. A report on the results of earth dam investigations was submitted. The report covered purpose and procedure of investigations, available clay material, available rock material, saddles, and the weak slopes of the Azote-Caballo Ridge.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on November 30, 1930, was 23,907, composed of 8,071 Americans, 2,892 of whom were men, 2,456 women, and 2,723 children; 189 Europeans, 86 of whom were men, 30 women, and 73 children; and 15,647 West Indians, 4,262 of whom were men, 2,818 women, and 8,567 children. The total number of persons in quarters on November 30, 1929, was 22,138.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of November 19, 1930, with a comparison of the working force for the preceding month and for November, 1929:

	Total employees.		As of November 19, 1930.		
	November, 1929.	October, 1930.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office	160	118	54	63	117
Electrical	324	368	167	199	366
Municipal Engineering	862	870	100	872	972
Lock operation	953	959	249	740	989
Dredging	1,275	1,194	200	981	1,181
Madden Project	648	206	25	167	192
Mechanical	1,443	1,429	510	916	1,426
Marine	835	804	199	578	777
Fortifications	288	359	21	144	165
Total	6,788	6,307	1,525	4,660	6,185
Supply Department:					
Quartermaster	2,562	1,770	201	1,529	1,730
Commissary	1,561	1,587	234	1,345	1,579
Cattle Industry—Plantations	123	97	2	97	99
Hotel Tivoli	112	114	8	110	118
Hotel Washington	110	108	8	99	107
Transportation	316	325	77	247	324
Total	4,784	4,001	530	3,427	3,957
Accounting Department	210	209	203	6	209
Health Department	1,151	1,097	283	825	1,108
Executive Department	857	883	547	336	883
Total	2,218	2,189	1,033	1,167	2,200
Panama Railroad Company:					
Superintendent	337	305	48	241	289
Transportation	189	190	66	127	193
Receiving and Forwarding Agency	1,332	1,116	79	1,143	1,222
Coaling Stations	265	231	43	165	208
Total	2,123	1,842	236	1,676	1,912
Grand total, November, 1929	15,913				
Grand total, October, 1930		14,339			
Grand total, November, 1930			3,324	10,930	14,254

Additions to the gold force on the Isthmus in November were as follows: Employed in the United States, 4; employed on the Isthmus, 7; reemployed on the Isthmus, 6; total, 17. Separations from the gold force totaled 25, as follows: Resigned, 9; discharged, 10; retired, 3; died, 3. At the end of the month there were on file 650 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 158 deaths occurred during the month of November, 1930, among the population of the Canal Zone, and the cities of Panama and Colon (population, 143,636), which is equivalent to an annual death rate of 13.20 per 1,000 population. The leading causes of death were: Tuberculosis (various organs), 29; pneumonia (broncho and lobar), 19; diarrhea and enteritis, 16; and nephritis (acute and chronic) 16. There were 8 deaths from syphilis, 8 from organic diseases of the heart, 4 from cancer, and 1 each from measles and leprosy. There were 26 deaths among non-residents; these are not included in the above statistics.

There were 398 live births and 19 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 34.84. Deaths among children under 1 year of age numbered 45, giving an infant mortality rate, based on the number of live births reported, of 113.07.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during the month was 116, of whom 16 were employees (2 white and 14 colored), 12 were members of employees' families (2 white and 10 colored), 9 were Canal Zone agriculturists, 60 were other civilian nonemployees, and 19 were Army and Navy personnel. Of the 28 employees and members of employees' families, 19 were probably infected outside our sanitized areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There were no deaths from malaria among residents.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$307,454.62, of which \$295,271.02 was for the Department of Operation and Maintenance, and \$12,183.60 for other Panama Canal departments.

FINANCIAL STATEMENT.

The following statement shows in condensed form the aggregate revenue and expenditures for the month of October, 1930, as compared with October, 1929, together with aggregate figures for the first 4 months of the current fiscal year as compared with the same period in the fiscal year 1930.

It is impossible to submit figures for the month of November at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	October, 1929.	October, 1930.	To end of October.	
			Last year.	This year.
Tolls.....	\$2,485,936.86	\$2,288,973.08	\$9,274,829.03	\$8,605,886.77
Other receipts.....	363,425.51	314,103.39	1,416,507.36	1,299,106.12
Total transit revenues.....	2,849,362.37	2,603,076.47	10,691,336.39	9,904,992.89
Total transit expenses.....	1,129,892.81	1,154,729.17	4,412,137.49	4,448,778.06
Net transit revenues.....	1,719,469.56	1,448,347.30	6,279,198.90	5,456,214.83
Three per cent capital charge.....	621,631.72	626,169.05	2,482,347.03	2,503,220.81
Transit surplus.....	1,097,837.84	822,178.25	3,796,851.87	2,952,994.02
Business revenues.....	1,506,447.00	1,297,755.92	6,317,794.26	6,266,835.90
Business expenses.....	1,437,121.11	1,236,691.10	5,975,112.00	5,995,423.79
Net business revenues.....	69,325.89	61,064.82	342,682.26	271,412.11
Three per cent capital charge.....	62,357.19	64,855.45	260,944.70	272,957.95
Business surplus.....	6,968.70	(3,793.63)	81,737.56	(1,545.84)
Combined revenues.....	4,355,809.37	3,900,832.39	17,009,130.65	16,171,828.79
Combined expenses.....	2,567,013.92	2,391,423.27	10,387,249.49	10,444,201.85
Net revenues.....	1,788,795.45	1,509,409.12	6,621,881.16	5,727,626.94
Three per cent capital charge.....	633,938.91	691,024.50	2,743,291.73	2,776,178.76
Combined surplus.....	1,104,856.54	818,384.62	3,878,589.43	2,951,448.18

() Denotes deficit.

Respectfully,

J. L. SCHLEY,
Acting Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending December 20, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Ancon.....	Panama R. R. S. S. Line.....		December 7.....		616
Cerigo.....	Hamburg-American Line.....		December 7.....		430
Baralt.....	Royal Netherlands S. S. Co.....		December 7.....		70
Kreta.....	Hamburg-American Line.....		December 7.....		115

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Santa Barbara	Grace Line	December 7	December 7	251	
Tolosa	United Fruit Co.	December 7	December 7	40	317½
Baarn	Royal Netherlands S. S. Co.	December 7	December 7	52	177
Wisconsin	French Line	December 7	December 8	270	187
S. M. Spalding	Pan-American Petroleum Co.	December 7	December 9	10,426	(¹)
Lochmonar	Royal Mail S. P. Co.	December 8	December 8	42	67
Barneveld	Royal Netherlands S. S. Co.	December 8	December 9	93	588
Donau	North German Lloyd	December 8	December 9	87	344
Rhein	Hamburg-American Line	December 8	December 9	(¹)	106
Esfuego	Colon Import & Export Co.	December 8	December 9	(¹)	49
Santa Rita	Grace Line	December 8	December 9	163	3½
Perou	French Line	December 8	December 10	34	397
Champerico	Pacific Steam Navigation Co.	December 8	December 13	152	334½
Knut Nelson	Fred Olsen & Co.	December 9	December 9	(¹)	35
Lisbon Maru	Nippon Yusen Kaisha	December 9	December 9	102	(²)
Abangarez	United Fruit Co.	December 9	December 10	542	7
Crijnsen	Royal Netherlands S. S. Co.	December 9	December 10	57	388
Triona	United Fruit Co.	December 10	December 10	1,251	(²)
San Antonio	French Line	December 10	December 11	31	46
Metapan	United Fruit Co.	December 10	December 11	554	390
Cauca	National Navigation Co.	December 10	December 12	35	279
Defiance	Roosevelt S. S. Co.	December 11	December 11	254	(¹)
Santa Maria	Grace Line	December 11	December 11	169	116
City of Panama	Panama Mail S. S. Co.	December 11	December 12	859	123
Drechtijk	Holland-America Line	December 11	December 12	123	211
Crijnsen	Royal Netherlands S. S. Co.	December 12	December 13	(¹)	577
Saint Louis	French Line	December 12	December 13	538	13
Atlantida	Standard Fruit & S. S. Co.	December 12	December 13	37	348
Cali	Roland Line	December 12	December 13	961	
Caldas	National Navigation Co.	December 12	December 13	(²)	51
Asia	Danish-East Asiatic Co.	December 12	December 13	76	(²)
Adolf von Baeyer	Hamburg-American Line	December 12	December 13	66	25
Nosa King	N. O. & S. A. S. S. Co.	December 13	December 13	277	
Martinique	Colombian S. S. Line	December 13	December 13	25½	401
San Clemente	States S. S. Co.	December 13	December 13	24	
Abangarez	United Fruit Co.	December 13	December 13	34	442
Iriona	United Fruit Co.	December 13	December 13	(¹)	419
Galicia	Hamburg-American Line	December 13	December 13	(²)	168
Oropes	Pacific Steam Navigation Co.	December 13	December 13	65	
Davisan	Leyland S. S. Line	December 13	December 13	(¹)	99
Koenigsberg	North German Lloyd	December 13	December 13	2	(¹)
Cali	Roland Line	December 13	December 14		168½
Nosa King	N. O. & S. A. S. S. Co.	December 13	December 14		205
San Clemente	States S. S. Co.	December 13	December 14		19
Losada	Pacific Steam Navigation Co.	December 14	December 14	22	22
Feltre	Nav. Libera-Tristina	December 14	December 15	136	(¹)
Georgie	French Line	December 14	December 15	32	455
Bitterfeld	Hamburg-American Line	December 14	December 15	6	437
Venezuela	Panama Mail S. S. Co.	December 15	December 16	69	581
Tosca	Knut Knutsen Line	December 15	December 16	1	(²)
Ulua	United Fruit Co.	December 15	December 17	587	18
Pacific Pioneer	Furness, Withy & Co.	December 15	December 17	(¹)	119
Alvarado	Pacific Steam Navigation Co.	December 16	December 16	150	46
Amerika	Danish-East Asiatic Line	December 16	December 16	6	(²)
Wiegand	North German Lloyd	December 16	December 16	32	38
Schwaben	North German Lloyd	December 16	December 17	49	239
Camden	United Fruit Co.	December 16	December 17	5,667	(¹)
Tela	United Fruit Co.	December 17	December 17	1,169	53
Wyoming	French Line	December 17	December 17	64	(¹)
Orcoma	Pacific Steam Navigation Co.	December 17	December 18	81	224
Parthenia	Donaldson Line	December 17	December 18	(¹)	261
Illinois	French Line	December 17	December 18	220	(¹)
Durazzo	Hamburg-American Line	December 17	December 17	327	
Cristobal	Panama R. R. S. S. Line	December 17	December 17	2,984	
Sixaola	United Fruit Co.	December 17	December 18	344	442
Teno	Chilean Line	December 18	December 18	(¹)	8
Benjamin Franklin	Fred Olsen & Co.	December 18	December 18	148	(¹)
Grunewald	Hamburg-American Line	December 18	December 18	73	16
Manizales	North German Lloyd	December 18	December 19	386	203
Kinderdijk	Holland-American Line	December 18	December 19	243	223
Convallaria	Aluminium Line	December 18	December 19	697	222
El Salvador	Panama Mail S. S. Co.	December 18	December 19	960	178
San Jose	United Fruit Co.	December 19	December 19	949	(²)
Bodegraven	Royal Netherlands S. S. Co.	December 19	December 19	108	322
Santa Teresa	Grace Line	December 19	December 20	88	75
Dora K.	R. Feuillebois	December 19	December 20	(¹)	126
Cafalu	Standard Fruit & S. S. Co.	December 19	December 20	228	414
Cauca	National Navigation Co.	December 19	December 19	287	
Tela	United Fruit Co.	December 20	December 20	16	197
San Francisco	Hamburg-American Line	December 20	December 20	65	77
Bridgetown	United Fruit Co.	December 20	December 20	19	

¹ No cargo discharged.

² No cargo laded.

³ Four packages.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, December 20, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Tons.	Gross.	Net.	Nature.	Tons.	Gross.	Net.
San Clemente	13	15.00	14	6.05	14	13.35	14	14.40	American	Omker Line	410.0	54.4	17.2	Philadelphia, Pa.	Seattle, Wash.	General	1,891	6,476	4,682
Losibank	13	21.15	14	6.10	14	12.40	14	13.25	British	Bank Line, Ltd.	426.7	57.4	22.6	New York, N. Y.	Shanghai, China.	General	5,427	7,623	5,412
Florence	14	7.30	14	7.45	14	14.32	14	15.35	American	Luckenbach Line	401.8	52.0	20.6	New Orleans, La.	Los Angeles, Calif.	General	3,062	6,002	4,621
Commissioner	13	22.25	14	7.50	14	14.26	14	15.35	American	Merrick Chapman, Scott	408.3	28.3	21.0	New York, N. Y.	Los Angeles, Calif.	Ballast	3,310	6,118	4,918
Comadolite	14	8.00	14	9.05	14	16.25	14	17.40	British	Imperial Oil Co.	510.0	68.2	22.7	Newport News, Va.	Talara, Fern.	Ballast	11,556	6,772	6,772
Calli	12	18.45	14	0.00	14	17.48	14	18.50	German	Poland Line	516.0	92.0	32.0	Charleston, C. Z.	Guaytiquil, Uruguay	General	170	1,105	6,698
Losada	13	3.05	14	10.15	14	17.58	15	2.55	British	North Atlantic Nav. Co.	503.0	44.2	22.0	Hull, England.	Magalhães, Chile.	General	6,150	7,221	4,844
Nosa King	13	20.45	14	12.00	14	19.30	15	4.10	American	O. & S. S. S. Co.	520.0	44.2	22.0	New Orleans, La.	Talcahuano, Chile.	General	2,408	2,478	2,540
Moroco	14	6.25	14	13.20	14	22.29	14	22.30	American	Reichleim Steel Corp.	550.3	72.2	22.0	Philadelphia, Pa.	Gratz Cranite, Chile	Ballast	3,217	13,551	4,207
West Cape	14	10.35	14	15.15	14	22.50	15	6.00	American	McCormick S. S. Co.	493.8	51.2	17.3	Philadelphia, Pa.	San Francisco, Calif.	General	3,171	7,705	4,907
Pedree	14	9.30	15	6.00	15	12.52	15	14.10	Italian	Thy-Albera Trieste	446.8	36.6	20.0	New York, N. Y.	Vancouver, B. C.	General	2,173	7,025	4,862
New Jersey	15	9.20	15	9.40	15	16.03	15	18.54	Japanese	Otsuka Sosen Kaisha	416.1	50.9	22.0	New York, N. Y.	Los Angeles, Calif.	Ballast	2,003	8,982	6,272
Kimul Maru	14	12.05	15	10.55	15	18.57	15	19.32	French	Compagnie Generale	418.1	52.3	22.0	Harve, France.	Santiago, Chile.	General, tobacco	2,003	8,982	6,272
Garage Stone	15	12.50	15	12.50	15	19.20	16	10.45	Panamanian	Robert Wilco	48.0	11.9	15.0	Colon, Rep. Panama	Corral, Chile.	Ballast	3,045	6,320	4,932
Bradburn	12	17.22	13	18.45	16	9.00	16	10.45	British	S. W. R. Smith & Sons	370.0	54.3	15.0	Glasgow, Scotland.	Balboa, C. Z.	Ballast	97	97	370
Tosca	12	18.00	16	6.25	16	14.20	16	16.25	Norwegian	Knut Knutsen	375.8	51.4	25.0	Oslo, Norway	Vancouver, B. C.	Ballast	6,105	9,689	5,273
Stevens	12	18.25	16	6.25	16	13.16	16	16.25	Norwegian	Anglo-Saxon S. S. Co.	420.0	57.3	28.0	Newcastle, Eng.	Valdivia, Chile	Ballast	6,105	9,689	5,273
West Chamargo	12	20.20	16	7.20	16	13.08	16	16.25	American	McCombs S. S. Co.	410.0	54.2	26.3	Baltimore, Md.	San Francisco, Cal.	Ballast	2,714	6,819	4,497
Sagadahoe	13	21.05	16	7.40	16	13.08	16	16.25	American	Richfield Oil Co.	420.3	54.2	26.3	Baltimore, Md.	San Francisco, Cal.	General	2,714	6,819	4,497
Huguenot	13	3.55	16	8.35	16	16.43	17	17.45	American	Panama Mail S. S. Co.	494.0	56.2	19.0	New York, N. Y.	Vancouver, B. C.	Ballast	8,916	7,345	5,357
Venezuela	13	3.30	16	10.15	16	18.49	16	18.50	American	Amer-Hawaiian Line	454.3	57.7	19.0	Boston, Mass.	Los Angeles, Calif.	General	3,075	5,334	3,909
Arzonan	16	9.30	16	10.05	16	18.40	16	18.55	American	East Asiatic Co.	403.0	62.0	19.6	Copenhagen, Den.	Seattle, Wash.	General	2,578	7,983	5,363
America	16	9.30	16	12.52	16	19.03	16	20.00	Danish	North German Lloyd	393.0	54.0	19.10	Hamburg, Germany	Vancouver, B. C.	General	3,658	11,000	8,076
Wiegand	16	6.30	16	13.35	16	21.10	16	22.30	German	U. S. Army	89.0	22.0	.....	Balboa, C. Z.	Balboa, C. Z.	Ballast	.....	.....	.....
Gen. G. W.	.....	.....	.....	.....	.....	.....	.....	.....	Panamanian	C. A. Wilson	12.6	4.0	.....	Balboa, C. Z.	Balboa, C. Z.	Ballast	.....	.....	.....
Geity	.....	.....	.....	.....	.....	.....	.....	.....	American	Dimon S. S. Corp.	409.0	54.0	16.6	Philadelphia, Pa.	Seattle, Wash.	General	3,740	6,630	4,916
Bessie J.	.....	.....	.....	.....	.....	.....	.....	.....	American	Furness, Withy & Co.	435.0	60.0	18.4	Glasgow, Scotland.	Vancouver, B. C.	General	.....	.....	.....
Pacific	.....	.....	.....	.....	.....	.....	.....	.....	British	The Texas Co.	416.8	56.0	18.0	Wilmington, Del.	Los Angeles, Calif.	Ballast	451	9,630	6,943
Pacific	.....	.....	.....	.....	.....	.....	.....	.....	American	Standard Oil Co.	440.0	58.2	22.0	Paulsboro, N. J.	San Francisco, Cal.	Ballast	.....	.....	.....
Pioneer	16	5.20	17	6.00	17	12.56	17	14.00	British	Arrow Line	410.0	54.0	19.0	Baltimore, Md.	Seattle, Wash.	General	.....	.....	.....
K. P.	16	20.20	17	6.15	17	13.53	17	15.25	American	Arrow Line	410.0	54.0	19.0	Baltimore, Md.	Seattle, Wash.	General	.....	.....	.....
Kingbury	17	3.55	17	7.20	17	14.52	17	18.00	American	Arrow Line	410.0	54.0	19.0	Baltimore, Md.	Seattle, Wash.	General	.....	.....	.....
Charles Christenson	17	4.30	17	7.25	17	15.16	17	16.40	American	Arrow Line	410.0	54.0	19.0	Baltimore, Md.	Seattle, Wash.	General	4,398	6,668	4,903

¹ Tanker. ² Motor ship. ³ Yacht. ⁴ General, iron, and cement. ⁵ Panga. ⁶ General, iron, and cement.

Edward	16	20	55	17	10	15	17	17	14	17	18	15	American	436	57	0	20	10	Boston, Mass.	Tacoma, Wash.	General	3,150	8,543	6,427
Luckenbach	17	3	20	17	12	25	17	19	38	17	20	35	American	540	72	0	24	0	Baltimore, Md.	Cruz Grande, Chile	Ballast	14,325	4,655	7,027
Lebore	17	8	10	17	14	10	17	20	45	17	21	45	French	470	61	0	22	1	Havre, France	Vancouver, B. C.	Ballast	2,259	10,440	7,027
Wyoming	17	8	10	17	6	20	17	13	52	17	18	55	American	180	35	6			Cristobal, C. Z.	Ballast	6,236	5,979	4,319	
Swan	17	4	15	17	18	00	18	9	51	18	11	55	British	396	53	5	22	0	Norfolk, Va.	Balboa, C. Z.	Coal	1,761	12,417	8,305
Orient City	17	14	10	18	5	55	18	13	45	18	15	55	British	511	62	0	24	0	Sta. Rosalia, Mex.	Talcahuano, Chile	General	6,605	4,340	
Orcoma	17	22	25	18	6	10	18	13	37	18	16	10	German	224	41	0	14	2	Balboa, C. Z.	Ballast	2,257	2,092	1,808	
Sacramento	18	00	30	18	7	15	18	14	58	18	16	10	American	411	55	0	19	9	Los Angeles, Calif.	Ballast	4,511	4,851	3,326	
Mittelmeer	18	2	15	18	7	20	18	15	23	18	16	35	British	250	51	0	19	8	Seattle, Wash.	Fuel oil	797	5,831	4,316	
Lake Gorin	18	5	30	18	7	20	18	16	20	18	18	48	British	385	51	0	19	8	Curacao, D. W. I.	General, bananas	6,747	9,082	6,140	
El Lobo	17	16	40	18	9	30	18	17	25	18	18	48	Dutch	399	62	0	18	6	Vancouver, B. C.	Ballast	5,994	3,876		
Partuena	17	16	40	18	11	20	18	18	07	18	19	12	Dutch	465	51	0	13	6	Seattle, Wash.	Ballast				
Tabian	18	6	20	18	11	20	18	18	07	18	19	12	Dutch	381	0				Los Angeles, Calif.	Ballast				
Sommerstad	18	14	05	18	14	15	18	21	04	19	1	30	Norwegian	452	59	5	24	5	Oslø, Norway	Vancouver, B. C.	Ballast	6,747	9,082	6,140
Benjamin	18	6	45	18	15	05	18	22	58	20	14	00	Norwegian	452	59	5	24	5	Oslø, Norway	Vancouver, B. C.	Ballast	6,747	9,082	6,140
Franklin	18	16	20	18	17	40	19	9	45	19	12	05	American	513	68	2	22	0	London, England	Los Angeles, Calif.	Ballast	11,719	8,619	
California	18	18	30	19	6	05	19	13	19	19	14	30	Danish	385	0				Toopollia, Chile	General	1,911	6,515	4,756	
Standard	18	21	10	19	6	25	19	14	20	19	15	40	American	440	56	0	22	0	Galveston, Tex.	Manila, P. I.	General	6,009	8,329	6,157
Nordkap	18	21	10	19	6	25	19	14	20	19	15	40	American	377	0				Baltimore, Md.	General	3,341	5,485	3,879	
Invinible	18	22	45	19	7	50	19	14	42	19	15	40	British	456	62	0	17	2	Singapore, Str. Set.	Los Angeles, Calif.	Ballast	2,576	7,376	6,618
San Diego	19	00	25	19	8	35	19	17	29	19	17	55	American	430	59	2	19	0	Perth, Amboy, N. J.	Valparaiso, Chile	General	1,680	7,764	4,672
Silverpress	19	00	25	19	8	35	19	17	29	19	17	55	American	421	56	0	25	10	New York, N. Y.	Valparaiso, Chile	General	1,680	7,764	4,672
Fat Doheny	18	21	35	19	10	30	19	17	31	19	18	40	Chilean	421	56	0	25	10	Waterford, Ireland	Los Angeles, Calif.	Ballast	5,616	4,117	
Tato	18	23	35	19	10	30	19	17	31	19	18	40	Chilean	421	56	0	25	10	New York, N. Y.	Valparaiso, Chile	General	1,680	7,764	4,672
Tajin Maru	19	4	30	19	11	05	19	18	34	19	19	55	Japanese	375	51	8	14	6	Rotterdam, Holland	Los Angeles, Calif.	Ballast	5,187	7,820	5,661
Heranger	19	6	00	19	11	30	19	19	08	19	20	00	British	426	57	0	22	1	Rotterdam, Holland	Los Angeles, Calif.	Ballast	3,948	6,203	4,672
Foylbank	19	9	10	19	12	10	19	19	45	19	21	10	German	449	58	0	16	0	New Orleans, La.	Shanghai, China	Cotton	5,187	7,820	5,661
Witram	19	10	35	19	12	10	19	19	45	19	21	10	German	385	51	0	21	0	Bromerhaven, Ger.	Vancouver, B. C.	Ballast	3,948	6,203	4,672
Aden Maru	19	10	35	19	12	10	19	19	45	19	21	10	Japanese	385	51	0	21	0	Norfolk, Va.	Shanghai, China	Cotton, rosin, etc.	3,948	6,203	4,672
Lumina	19	8	45	19	13	00	19	21	30	19	22	40	British	407	52	3	19	6	Granezmouth, Eng.	Los Angeles, Calif.	Ballast	5,940	4,108	
Kinderdijk	18	11	50	19	14	08	19	21	51	19	22	40	Dutch	469	58	4	19	7	Rotterdam, Holland	Portland, Oreg.	General, bananas	1,683	8,515	6,060
Breeze	19	14	25	19	14	45	19	23	10	20	20	00	American	364	0				San Francisco, Cal.	Lubricating oil	2,500	5,113	3,571	
Manizales	18	17	20	19	15	05	19	22	30	19	23	48	German	364	0				Cristobal, C. Z.	General	203	1,132	741	
Clemens	19	14	15	20	6	15	20	14	03	20	15	25	American	480	5	66	0	21	Cristobal, C. Z.	Ballast	12	12		
Brightman	19	14	15	20	6	15	20	14	03	20	15	25	American	480	5	66	0	21	Cristobal, C. Z.	Ballast	9,777	7,612		
Axel	19	14	15	20	6	15	20	14	03	20	15	25	American	480	5	66	0	21	Cristobal, C. Z.	Ballast	9,777	7,612		
Johnson	19	19	55	20	7	35	20	14	55	20	16	55	Swedish	322	52	6	21	5	Stockholm, Swed.	San Francisco, Cal.	General	4,333	6,642	4,860
Point Sur	20	2	50	20	7	20	20	15	28	20	16	55	American	324	46	0	22	0	Corpus Christi, Tex.	Tacoma, Wash.	General	3,966	3,984	2,612
Broad Arrow	20	4	10	20	7	20	20	15	51	20	16	55	American	467	62	7	22	0	New York, N. Y.	Ballast	9,700	6,804		
Chastine	20	6	40	20	8	35	20	16	15	20	19	30	Danish	378	50	0	22	0	Sydney, C. B.	Manila, P. I.	General	4,733	5,526	4,066
Maersk	20	9	00	20	9	30	20	16	42	20	19	25	American	472	53	7	20	0	Boston, Mass.	Portland, Oreg.	General	2,826	7,103	4,991
Ohtoon	20	10	00	20	10	15	20	17	17	20	18	25	British	460	62	8	22	0	Estero Bay, Calif.	Ballast	9,174	6,017		
Voco	20	16	45	20	13	50	20	20	46	21	2	18	American	360	51	6	22	0	Wilhelms, Ger.	Valparaiso, Chile	General	1,270	5,726	4,086
Santa Teresa	19	13	40	20	14	15	20	21	48	20	22	40	American	418	56	1	18	10	New York, N. Y.	Los Angeles, Calif.	Ballast	6,031	4,983	
Lightbourne	19	13	40	20	14	15	20	21	48	20	22	40	American	330	43	0	16	3	Cristobal, C. Z.	San Francisco, Cal.	Ballast	3,675	2,359	
San Jose	19	19	10	20	15	05	20	22	00	21	7	39	American	436	64	0	16	3	Cristobal, C. Z.	San Francisco, Cal.	Ballast	3,675	2,359	
Norfolk	20	17	25	20	18	45	21	9	40	21	15	20	British	520	64	0	20	0	Falmouth, England	New Zealand	Ballast	12,963	9,291	
San Francisco	20	7	55	20	20	05	21	11	39	21	12	50	German	432	59	1	23	0	Hamburg, Germany	Vancouver, B. C.	General	5,163	8,454	6,344

† Tanker. ‡ Minc sweeper. § Gunboat. ¶ Launch. ** Steel, rails, and machinery. †† Automobile parts and machinery. ††† General, steel, and cement. †††† General, cement, paper, etc.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Chateau Thierry ¹⁴ ..	13	22	14	6	22	14	15	00	15	1.05	438.9	58.2	26.0	Balboa, C. Z.	New York, N. Y.	Army supplies.	154	6,715	5,058
Bronxville ¹⁴ ..	13	22	14	6	26	14	16	15	14	46.15	410.0	54.2	26.0	Pt. Alberti, B. C.	Philadelphia, Pa.	Lumber.	7,154	5,800	3,084
Mari ¹⁴	14	1	30	14	7	57	14	19	45	11	355	50.1	27.0	Caleta Buena, Chile	Azores ¹⁵ , N. Y.	Nitrate of soda.	5,800	4,346	3,084
Abron ¹⁴	14	00	30	14	8	07	14	17	45	11	355	52.2	27.0	Seattle, Wash.	New Orleans, La.	Lumber, general.	1,835	5,732	4,131
Lake Ormac ¹⁴ ..	14	3	20	14	9	44	14	19	40	14	20.55	43.8	23.0	Seattle, Wash.	Philadelphia, Pa.	Lumber, auto. pls.	2,992	2,750	1,741
Norman Star ¹⁴ ..	14	10	30	14	11	46	14	19	58	15	4.35	45.0	26.3	Seattle, Wash.	Newcastle, Eng.	Frozen fruit.	3,870	7,517	5,458
Standard Arrow ¹⁴ ..	14	19	05	15	6	09	15	14	20	15	487.6	62.7	27.0	Los Angeles, Calif.	Portland, Me.	Gasoline, gas oil.	11,450	9,698	6,783
Henry S. Grove ¹⁴ ..	14	23	00	15	6	42	15	15	10	15	404.5	53.9	29.0	Seattle, Wash.	Baltimore, Md.	Lumber, ore	7,520	6,755	4,688
Gen. G. W. Getty ¹⁵	15	9	30	15	10	14	15	17	55	15	98.0	22.0	41.0	Balboa, C. Z.	Cristobal, C. Z.	Apples, smelter.	2,789	4,717	3,359
Parana ¹⁵	15	2	30	15	12	15	15	20	30	16	375.3	48.3	23.0	Vancouver, B. C.	Hamburg, Germany	Ballast.	2,992	2,844	1,748
Floreana ¹⁴ ..	16	3	10	16	6	26	16	13	40	16	303.0	43.0	15.0	Callao, Peru.	New York, N. Y.	Fruits.	3,163	6,206	4,421
Alvarado ¹⁴ ..	16	8	35	16	9	10	16	16	20	19	408.5	54.2	27.0	Talcahuano, Chile.	Rotterdam, Holland.	General.	10,513	10,002	6,743
Edda ¹⁴	16	8	50	16	10	39	16	19	05	17	491.4	63.8	28.0	Vancouver, B. C.	Hamburg, Germany	General.	6,838	7,107	5,041
Loriga ¹⁴	16	9	50	16	10	39	16	19	05	17	491.4	63.8	28.0	Portland, Ore.	Boston, Mass.	General.	6,838	7,107	5,041
Schwaben ¹⁴ ..	16	10	10	16	10	51	16	20	10	20	225.0	41.0	41.0	Balboa, C. Z.	Cristobal, C. Z.	Ballast.	6,439	8,699	6,363
Pennsylvania ¹⁴ ..	16	10	10	16	10	51	16	20	10	20	225.0	41.0	41.0	Balboa, C. Z.	Cristobal, C. Z.	Ballast.	6,439	8,699	6,363
Ashville ¹⁶	16	12	37	16	20	40	16	20	40	16	225.0	41.0	41.0	Balboa, C. Z.	Cristobal, C. Z.	Ballast.	6,439	8,699	6,363
Horace Luckenbach ¹⁶ ..	16	16	45	16	17	24	17	11	40	17	445.0	53.0	25.0	Portland, Ore.	Boston, Mass.	General.	8,147	10,056	7,226
Pacific Grove ¹⁴ ..	16	17	30	16	18	25	17	12	10	17	450.0	60.8	28.0	Vancouver, B. C.	Glasgow, Scotland.	General.	7,250	6,236	4,301
Illinois ¹⁶	17	6	35	17	8	31	17	16	40	17	400.5	57.6	17.0	Valparaiso, Chile.	Le Havre, France.	Nitrates, copper.	2,689	1,632	1,011
Durazo ¹⁶	17	8	30	17	9	18	17	17	50	18	227.5	34.4	13.0	Cristobal, C. Z.	Cristobal, C. Z.	General.	3,000	4,904	2,902
Sacramento ¹⁷ ..	17	15	41	17	22	25	18	6	10	18	224.0	40.0	40.0	Balboa, C. Z.	New York, N. Y.	General.	3,000	4,904	2,902
El Salvador ¹⁷ ..	17	13	50	18	6	25	18	14	20	18	360.2	51.6	23.0	San Francisco, Cal.	Cristobal, C. Z.	General.	3,000	4,904	2,902
Caldas ¹⁴	17	20	15	18	6	35	18	13	55	18	116.0	21.1	7.6	Pto. Armuzales, R.P.	Cristobal, C. Z.	Ballast.	211	124	124
Gertrude Kellogg ¹⁷	17	20	55	18	6	40	18	15	30	18	391.9	51.2	25.6	Manila, P. I.	New York, N. Y.	Coconut oil.	6,700	5,393	3,719
Emil Kirdorf ¹⁷ ..	18	6	00	18	7	24	18	16	00	18	409.8	53.8	23.0	Corral, Chile.	Banburg, Germany	General.	6,653	7,141	5,408
Manitales ¹⁷	18	6	30	18	7	55	18	19	05	18	216.5	32.9	12.0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	388	1,432	741
Selma City ¹⁸	18	6	30	18	8	34	18	19	15	05	424.2	56.2	26.0	Vancouver, B. C.	Avonmouth, C. Z.	General.	7,800	7,611	5,450
Bonstad ¹⁸	18	8	10	18	9	18	18	20	10	18	487.0	62.2	27.0	Cabo Blanco, Pern.	Halfax, N. S.	Crude oil.	12,510	9,198	6,287
Stornorfolk ¹¹ ..	18	8	10	18	9	18	18	20	10	18	400.6	52.2	24.0	Vancouver, B. C.	Rotterdam, Holland.	Lumber, general.	7,135	5,770	4,073
Nosa Queen ¹⁸ ..	18	14	40	18	15	23	18	23	00	19	329.0	46.2	20.8	Tocopilla, Chile.	New Orleans, La.	Lumber, general.	3,602	3,981	2,600
Boegaeven ¹⁸ ..	18	15	45	18	16	05	19	22	17	18	404.9	58.2	25.8	Corral, Chile.	Hamburg, Germany	Nitrates, gen.	7,816	7,834	6,018
San Jose ¹⁸	18	16	00	19	6	21	19	19	20	19	330.0	44.6	20.3	San Francisco, Calif.	Cristobal, C. Z.	Gen. gasoline.	6,613	3,309	2,069
Yankee Arrow ¹⁸ ..	18	16	13	19	6	44	19	19	20	19	468.3	62.7	27.2	Los Angeles, Calif.	Boston, Mass.	Gasoline.	11,285	8,046	4,960

¹⁴ Motor ship. ¹⁵ Junior mine planter. ¹⁶ Gunboat. ¹⁷ Cruiser. ¹⁸ For orders. ¹⁹ Cocoa, coffee, and hats. ²⁰ Beans, lentils, and nitrates.

Ship	Date	Yacht	Tug	Submarine	Tender	From	To	Line	Date	Vessel	Line	For						
El Mirlo	19 00-30	19	7-33	19 21-15	20	100	10	British	459.7	60.0	95.5	0	San Francisco, Cal.	London, England	Gasoline	10,455	8,088	4,930
Malina	18 19-05	19	8-05	19 21-15	20	1-10	British	500.9	63.3	97.8	0	Wellington, N. Z.	London, England	Gasoline	5,714	8,340	4,422	
Marion	18 19-05	19	8-46	19 22-20	19	22-00	19	British	419.0	55.0	97.9	0	Vancouver, B. C.	Hull, England	Wheat	9,870	6,094	4,329
Dhawan	18 22-30	19	9-34	19 22-20	20	3-50	American	435.0	55.0	97.2	0	New York, N. Y.	Koresene	10,990	7,046	4,351		
Cauca	18 23-00	19	9-40	19 19-25	21	6-10	Colombian	107.0	58.9	10.6	0	Buenaventura, Col.	Cristobal, C. Z.	Coffee	4,257	283	166	
Cauca	18 23-00	19	9-53	19 23-50	19	23-50	British	400.2	58.9	93.10	0	New York, N. Y.	Glennville, Scotland	Fresh fruit	4,977	8,289	5,102	
Antope	19 8-30	19	10-14	19 23-35	20	1-55	British	400.8	54.0	94.6	0	New York, N. Y.	Commerical ports	Phosphates	7,430	4,545	2,842	
Antope	19 8-30	19	10-50	19 23-45	19	23-45	Norwegian	381.9	54.0	94.5	0	New York, N. Y.	New York, N. Y.	Ore	7,349	4,562	2,759	
Rolling Stone	19 13-15	19	10-50	19 23-45	19	23-45	Norwegian	404.6	51.0	98.7	0	Wilmington, N. C.	Cristobal, C. Z.	Ballast	6,732	6,663	3,738	
Rolling Stone	19 13-17	19	14-30	20	8-55	20	American	485.0	58.3	95.3	0	Poston, Mass.	Avonmouth, Eng.	General	9,804	7,063	4,288	
Colombian	19 17-45	20	5-58	20 13-50	13	50	Norwegian	442.7	58.3	95.3	0	Baltimore, Md.	Baltimore, Md.	Gasoline	5,985	5,569	3,920	
Norwegian	19 17-45	20	5-58	20 14-50	20	14-50	American	391.8	51.3	95.6	0	Los Angeles, Calif.	New York, N. Y.	Gas oil	8,818	6,063	3,715	
Kekoskee	19 17-45	20	7-58	20 15-35	20	15-35	American	410.6	52.2	95.9	0	Los Angeles, Calif.	Cristobal, C. Z.	Crude oil	7,712	6,046	4,326	
Eagle	19 20-15	20	7-50	20 15-35	20	15-35	American	407.4	52.2	95.9	0	Balboa, C. Z.	Philadelphia, Pa.	Nitrates	8,326	7,384	4,459	
Eagle	19 20-15	20	7-50	20 16-30	20	16-30	American	421.3	50.0	94.0	0	Cabo Blanco, Peru.	Savannah, Ga.	Crude oil	7,712	6,046	4,326	
Swan	20 3-45	20	8-13	20 16-30	20	16-30	Chilean	390.0	50.0	94.0	0	Valparaiso, Chile	Savannah, Ga.	Crude oil	7,712	6,046	4,326	
Swan	20 4-30	20	8-32	20 18-25	19	18-25	American	231.0	50.0	94.0	0	Balboa, C. Z.	Cristobal, C. Z.	Nitrates	8,326	7,384	4,459	
Totten	20 4-30	20	8-32	20 18-25	19	18-25	American	231.0	50.0	94.0	0	Balboa, C. Z.	Cristobal, C. Z.	Nitrates	8,326	7,384	4,459	
S-19	20 4-30	20	8-32	20 18-25	19	18-25	American	231.0	50.0	94.0	0	Balboa, C. Z.	Cristobal, C. Z.	Nitrates	8,326	7,384	4,459	
S-19	20 4-30	20	8-32	20 18-25	19	18-25	American	231.0	50.0	94.0	0	Balboa, C. Z.	Cristobal, C. Z.	Nitrates	8,326	7,384	4,459	
Mallard	20 8-30	20	8-53	20 18-25	22	12-30	American	187.0	38.0	0	0	Balboa, C. Z.	Cristobal, C. Z.	Ballast	16	14	8	
Bessie J.	20 17	19	17	19	17	19	American	187.0	38.0	0	0	Balboa, C. Z.	Cristobal, C. Z.	Ballast	16	14	8	
Afton	20 17	19	17	19	17	19	American	187.0	38.0	0	0	Balboa, C. Z.	Cristobal, C. Z.	Ballast	16	14	8	

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Ship	Date	Yacht	Tug	Submarine	Tender	From	To	Line	Date	Vessel	Line	For
December 14	Talara via wayports	Talara via wayports	Pan American-Grace Airways	December 14	Martinique	Colombian S. S. Line	New York via wayports,					
December 15	New York via Habana	New York via Habana	United Fruit Co.	December 14	No. 9685	Pan American Airways	San Salvador way ports,					
December 16	Barranquilla and way ports	Barranquilla and way ports	Standard Fruit & S. S. Co.	December 14	No. 9685	Pan American Airways	Talara via wayports,					
December 17	Curacao, D. W. I.	Curacao, D. W. I.	United Fruit Co.	December 17	No. 698-M	Pan American Airways	Miami via wayports,					
December 18	Talara via wayports	Talara via wayports	Pan American-Grace Airways	December 17	No. 145-M	Pan American Airways	Santa Maria, Colombia,					
December 19	New York via Haiti	New York via Haiti	United Fruit Co.	December 17	Ulua	United Fruit Co.	Port Limon, Costa Rica,					
December 20	Avonmouth via way ports	Avonmouth via way ports	Panama R. S. S. Line	December 17	Coronado	Elders & Fyffes Line	Avonmouth via wayports,					
December 21	Avonmouth via way ports	Avonmouth via way ports	United Fruit Co.	December 17	Camden	United Fruit Co.	Curacao and Santa Maria,					
December 22	New Orleans via Kingston	New Orleans via Kingston	United Fruit Co.	December 17	Anacuetana	United Fruit Co.	Colon, Rep. of Panama,					
December 23	Colon, Rep. of Panama	Colon, Rep. of Panama	United Fruit Co.	December 18	Inapaquia	A. Tagaripulos	Colon, Rep. of Panama,					
December 24	Colon, Rep. of Panama	Colon, Rep. of Panama	United Fruit Co.	December 18	Tela	United Fruit Co.	Bocas, Rep. of Panama,					
December 25	Hamburg via way ports,	Hamburg via way ports,	Humburg-American Line	December 18	Struwalda	United Fruit Co.	New York via wayports,					
December 26	New Orleans and Hubana	New Orleans and Hubana	Standard Fruit & S. S. Co.	December 18	Corvallis	Aluminum Line	Port Limon, Costa Rica,					
December 27	Santa Maria, Colombia	Santa Maria, Colombia	Pan American Airways	December 18	Corvallis	Aluminum Line	Cartagena, Colombia,					
December 28	Colon, Rep. of Panama	Colon, Rep. of Panama	Standard Fruit & S. S. Co.	December 18	Dora K.	Pan American Airways	New York via wayports,					
December 29	Colon, Rep. of Panama	Colon, Rep. of Panama	Colon, Import & Export Co.	December 19	Dora K.	Pan American Airways	Barranquilla and way ports,					
December 30	Colon, Rep. of Panama	Colon, Rep. of Panama	United Fruit Co.	December 19	Tela	Standard Fruit & S. S. Co.	Bluefields and Port Limon,					
December 31	Bocas, Rep. of Panama	Bocas, Rep. of Panama	United Fruit Co.	December 20	Cefalu	Standard Fruit & S. S. Co.	New Orleans and way ports,					

(Continued on page 316, column 2.)

* Other than ships passing through the Canal.

* Motor schooner.

* Motor boat.

* Air mail carrier.

* Motor ship.

* Motor schooner.

Tourist Season for 1930-1931.

The tourist season for 1930-1931 was inaugurated on December 9, 1930, by the arrival at Cristobal of the Cunard Steamship Company's liner *Franconia*, with a party of 313 tourists on a cruise of the Caribbean Sea. Seven other special cruise parties will call at Cristobal this month, including the *S. S. Belgenland* with 176 passengers, arriving at Cristobal on December 23d on the first leg of her annual cruise around the world. The 6 other vessels are all on Caribbean cruises and are due at Cristobal between the 23d and the end of the month.

There has been an increasing popularity in the Caribbean cruises, many of the leading steamship lines diverting their large trans-Atlantic liners to these cruises during the winter months. Originating, ordinarily, at New York, the itinerary of these cruises include ports of call in the West Indies, northeastern South America, and Central America. Shore excursions at the Isthmus usually include an inspection of the locks at Gatun, a boat trip through Gaillard Cut, with luncheon and automobile sightseeing trips on the Pacific side.

The scheduled tours of the 1930-1931 season include 5 around-the-world cruises, and 38 special cruises in the Caribbean area; the latter involve calls at Cristobal, but do not include transit of the Canal. Advance estimates indicate there will be approximately 15,000 tourists arriving on these special cruises, in addition to which the United Fruit Company will bring 24 parties, averaging 50 to 75 persons each.

In addition to the tourists arriving on these special cruises, the Panama-Pacific Line, the Grace Line, the Panama Mail Line, the Dollar Line, the Chilean Line, the Pacific Steam Navigation Company, and other passenger-carrying lines regularly calling at Canal ports bring many hundreds of persons to the Isthmus weekly.

The advance estimate indicates there will be an increase of some 3,000 special cruise tourists over the 1929-1930 season, but it is generally prophesied in local interested circles that the actual number making these tours will be somewhat under the original estimate, owing to the world-wide adverse business conditions now prevailing.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective December 20, 1930.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb.	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.12
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Tolls Charges for Transit of the Panama Canal.

1. Merchant vessels carrying passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity as determined by the Panama Canal Rules of Measurement..... \$1.20
2. Vessels in ballast, without passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity as determined by the Panama Canal Rules of Measurement..... .72
3. Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton..... .50
4. Army and navy transports, colliers, hospital ships, and supply ships, the vessel to be measured by the same rules as are employed in determining the net tonnage of merchant vessels, per net ton..... 1.20
5. Tolls may not exceed the equivalent of \$1.25 per net registered ton as determined by United States rules of measurement, nor be less than the equivalent of \$0.75 per net registered ton so determined.
6. Vessels returning from Gatun Lake or original point of entry into the Canal, without passing through the locks at the other end, are charged tolls for one passage only.
7. Vessels transiting the Panama Canal from Cristobal to Balboa and return for the sole purpose of having repairs made at the Balboa dry dock and shops will be exempt from payment of tolls, but a charge will be made for pilotage and for handling lines as provided for in the current tariff or supplements thereto.

Coal.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$7.25 per ton of 2,240 pounds at Cristobal, and \$10.25 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., December 31, 1930. No. 22.

Traffic for Calendar Year 1930 will be Lowest Since 1926.

An estimate of the current calendar year's traffic, based on figures available for the first 29 days of December, indicates that there will be approximately 5,875 commercial transits during the year ending December 31, 1930, on which tolls amounting to approximately \$26,106,900 will be collected. This will be the smallest calendar year's traffic since 1926 when 5,420 vessels, paying \$23,901,540.04 in tolls, passed through the canal; and the smallest traffic for any 12-month period (fiscal or calendar year) since June 30, 1927, when a total of 5,475 vessels, paying \$24,228,830.11 in tolls, transited the canal.

From July, 1927, up to the beginning of the current calendar year, transits failed to reach the 500 mark in only two instances; during the current calendar year, however, transits have exceeded 500 in only three months, as follows: January, 531; March, 515; and October, 517.

For the calendar year 1930, it is estimated that the number of monthly commercial transits will average 489, as compared with 536 for 1929, 527 for 1928, 507 for 1927, and 451 for 1926.

New Bank Line Vessel Transits Canal.

The new motor ship *Foylebank*, the most recent addition to a fleet of new freight vessels recently placed in service by the Bank Line, transited the Canal on December 19, 1930, on her maiden voyage in the company's trade between the east coast of the United States and the Far East. She carried a cargo of approximately 5,187 tons of cotton laded at United States Gulf ports and destined to Kobe, Yokohama, and Shanghai. An item commenting on the speed of this new vessel appeared in a recent issue of the *Nautical Gazette*, in which it was stated that the *Foylebank* made the fastest run on record from Pilottown at the mouth of the Mississippi River to the port of New Orleans. The distance of 90 miles was covered in 5 hours and 5 minutes, an average speed of just under 18 miles per hour, which was considered especially noteworthy since the ship was going up instead of down, where speed runs are much easier. The article further states that the new vessel sailing out of Belfast made the trip across the Atlantic in heavy wintry seas at an average speed of 18 miles per hour.

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference.

It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, December 27, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Gauca *	19	19:25	21	6:10	21	13:21	21	16:20	Colombian.	National Navigation Co.	107.0	22.0	10.8	Cristobal, C. Z.	Buenaventura, Col.	General.	300	262	161
Port Duedin *	21	8:40	21	9:00	21	15:36	21	22:40	British.	Com'lth & Dom. Line.	466.0	59.6	24.6	Glasgow, Scotland.	Dunedin, N. Z.	General.	4,935	9,959	7,226
Durazzo	17	17:50	21	10:10	21	17:11	21	18:30	German.	Hamburg-Amer. Line.	226.0	34.0	13.4	Cristobal, C. Z.	Guayaquil, Ecuador	General.	208	1,633	1,041
Langanger *	21	11:50	21	12:00	21	18:27	21	21:00	Norwegian.	Anglo-Saxon Pet. Co.	473.6	64.6	19.0	Rotterdam, Holl'd.	Los Angeles, Calif.	Ballast.	9,626	6,839	4,496
Amerikaland *	21	15:20	21	16:45	22	9:36	22	14:00	Swedish.	Ore S. S. Corp.	561.0	72.0	22.3	New York, N. Y.	Cruz Grande, Chile	Ballast.	15,560	4,496	4,375
Hardanger	22	12:25	22	12:40	22	20:54	22	22:00	Norwegian.	Westfal, Larsen & Co.	375.0	52.0	12.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast.	5,977	4,375	3,863
Malard *	22	12:25	22	12:30	22	20:55	22	22:00	American.	U. S. Navy.	186.0	35.6	12.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	5,753	3,863	3,863
Callao	22	6:45	22	8:20	23	9:54	23	10:56	British.	T. & J. Harrison.	300.0	52.0	17.6	Liverpool, England	Vancouver, B. C.	Ballast.	20	1,919	875
All America *	22	10:45	22	20:40	23	11:46	23	13:45	American.	American Cables Co.	280.0	37.8	20.0	Curacao, D. W. I.	Callao, Peru.	Cables.	28,913	18,874	18,874
Belgenland	23	5:35	23	6:00	23	15:54	23	23:45	British.	Red Star Line.	670.0	78.4	30.0	New York, N. Y.	World cruise.	Ballast.	28,913	18,874	18,874
Ronneke *	22	15:55	23	7:25	23	10:35	23	18:00	American.	The Texas Co.	416.8	56.1	21.0	Key West, Fla.	Los Angeles, Calif.	Ballast.	6,331	4,990	4,990
Birmingham	22	4:5	23	7:00	23	16:59	23	18:40	American.	Isthmian S. S. Lines.	395.5	55.0	27.0	New York, N. Y.	Tacoma, Wash.	General.	8,505	7,304	5,188
Mirrabooka *	23	2:57	23	8:30	23	17:26	23	20:00	Swedish.	Transpacific S. S. Co.	435.0	57.0	18.0	New York, N. Y.	Sydney, Australia.	Steel.	1,050	8,274	6,098
Maple Branch.	23	4:25	23	8:35	23	17:46	23	19:10	British.	Nantlus S. S. Co.	400.0	52.0	20.0	Newcastle, Eng.	Magallanes, Chile.	General.	2,687	5,618	4,116
Puri	23	9:55	23	10:05	23	18:49	24	3:00	British.	Norton, Lilly & Co.	475.6	60.9	20.0	New Orleans, La.	Fremantle, Aus'la.	General.	4,063	8,946	6,145
Chr. Knudsen *	23	12:33	23	12:25	23	19:26	23	20:45	Norwegian.	Canadian Transp. Co.	381.0	54.0	18.8	Corner Brook, N. F.	Seattle, Wash.	Paper.	4,628	6,083	4,561
Cortona	23	10:30	23	13:20	23	20:00	23	21:20	British.	Donaldson Line.	414.0	54.7	18.0	Glasgow, Scotland.	Vancouver, B. C.	Ballast.	1,914	7,150	5,024
Minnesota	23	13:30	23	14:50	23	21:44	23	22:50	American.	Amer.-Hawaiian Line.	407.0	53.7	18.0	Boston, Mass.	Seattle, Wash.	General.	5,740	6,585	4,791
Vermar.....	24	3:05	24	6:20	24	13:46	24	15:00	American.	Calmar S. S. Corp.	410.5	54.2	21.0	Baltimore, Md.	Seattle, Wash.	Steel, general.	3,630	9,294	6,865
Lillian	24	6:30	24	10:30	24	17:04	24	18:58	American.	Luckenbach Line.	449.0	60.0	23.5	New York, N. Y.	Tacoma, Wash.	General.	8,160	7,611	5,450
Lukenbach.	24	11:10	24	11:25	24	18:40	25	00:35	American.	Isthmian S. S. Lines.	425.0	56.2	25.2	Baltimore, Md.	Sourabaya, Javn.	General.	5,228	12,872	9,577
Memphis City.	24	10:45	24	13:10	24	20:10	24	21:05	British.	Glasgow United Co.	402.4	55.0	16.0	Norfolk, Va.	Vancouver, B. C.	Ballast.	1,743	7,596	5,179
Janeta.	24	10:45	24	14:25	24	21:25	24	22:30	British.	Shaw, Savill & Albion.	500.3	63.3	27.11	London, England.	Auckland, N. Z.	General.	3,819	9,209	6,245
Ionic.	24	7:00	24	14:25	24	21:25	24	22:30	British.	Lancashire S. S. Co.	428.0	56.0	19.0	New York, N. Y.	Shanghai, China.	General.	2,321	3,983	2,629
Greystoke	24	14:35	24	14:50	24	21:55	25	1:25	British.	Rio Cape Line	441.0	60.0	22.6	New York, N. Y.	Manila, P. I.	General.	1,347	12,977	9,373
Castle *	24	14:50	24	15:05	24	22:35	24	23:37	British.	Nelson Line	324.0	46.2	19.6	New York, N. Y.	Seattle, Wash.	General.	2,688	7,849	5,806
Malayan	24	16:30	24	19:45	25	9:20	25	10:15	American.	Royal, Generale Italiana.	482.8	61.1	10.24	Genoa, Italy.	Valparaiso, Chile.	General.	4,448	16,611	6,611
Prince *	24	16:30	24	19:45	25	9:20	25	10:15	American.	Royal, Generale Italiana.	482.8	61.1	10.24	Genoa, Italy.	Valparaiso, Chile.	General.	2,396	10,687	6,633
Suwid	23	6:55	25	6:15	25	13:29	25	20:30	Italian.	Royal, Generale Italiana.	482.8	61.1	10.24	Genoa, Italy.	Valparaiso, Chile.	General.	9,841	6,946	6,946
Orazio *	24	7:35	25	9:00	25	15:59	25	17:23	Dutch.	Royal, Neth. S. S. Co.	449.7	58.0	18.0	Amsterdam, Holl'd	Antofagasta, Chile.	General.	2,396	10,687	6,633
Bemelon	24	7:35	25	9:00	25	15:59	25	17:23	Dutch.	Royal, Neth. S. S. Co.	449.7	58.0	18.0	Amsterdam, Holl'd	Antofagasta, Chile.	General.	9,841	6,946	6,946
Halicr.	25	11:30	25	10:45	25	17:58	25	19:25	British.	Andrew Weir & Co.	399.3	62.4	23.6	Pt. Arthur, Tex.	Auckland, N. Z.	Case oil.	2,396	10,687	6,633
Santa Barbara	25	11:30	25	10:45	25	17:58	25	19:25	British.	Andrew Weir & Co.	399.3	62.4	23.6	Pt. Arthur, Tex.	Auckland, N. Z.	Case oil.	9,841	6,946	6,946
Narvik	26	5:15	26	6:30	26	13:46	26	14:13	American.	Grace Line.	468.3	69.2	30.0	New York, N. Y.	Tacahano, Chile.	General.	2,396	10,687	6,633
Empire Arrow	26	4:35	26	6:30	26	13:46	26	14:13	American.	Standard Oil Co.	468.3	69.2	30.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	9,841	6,946	6,946
Narbank	26	5:15	26	6:30	26	13:46	26	14:13	British.	Andrew Weir & Co.	420.0	53.0	16.0	Bilbao, Spain	Los Angeles, Calif.	Ballast.	3,707	5,003	5,003
President	26	5:35	26	7:25	26	15:03	26	21:35	American.	Dollar S. S. Line	600.0	63.0	31.0	New York, N. Y.	Round the world.	General.	3,766	17,054	11,542

* Cable ship.

* Mine sweeper.

* Motor ship.

* Tanker.

City of	26	6.05	26	7.40	26	16.02	27	1.17	American	586.4	80.3	26.0	New York, N. Y.	San Francisco, Cal.	2,625	25,262	18,194
Pennsylvania	26	5.45	26	8.45	26	16.58	26	18.20	British	391.0	54.2	22.6	New York, N. Y.	Auckland, N. Z.	2,207	7,133	5,407
Glasgow	26	5.55	26	8.50	26	17.04	26	19.30	British	425.0	57.0	17.0	New York, N. Y.	Los Angeles, Calif.	2,207	7,012	5,022
Seminole	26	7.15	26	10.30	26	17.40	26	19.00	Spanish	361.0	50.3	15.0	Cardiff, England	Artica, Chile	3,874	4,488	3,054
Serantes	26	10.20	26	13.34	26	18.36	26	19.55	American	410.5	54.3	20.0	Philadelphia, Pa.	Tacoma, Wash.	3,874	4,488	3,054
Pacific Pine	26	2.00	26	12.40	26	19.25	26	20.58	Italian	523.0	60.0	23.6	Genoa, Italy	Vancouver, B. C.	290	7,165	4,926
California	26	11.55	26	12.45	26	20.10	26	21.20	American	435.0	56.0	19.6	New York, N. Y.	Los Angeles, Calif.	2,207	7,165	4,926
Aene	18	13.55	26	15.40	26	22.30	27	2.20	Colombian	316.0	51.0	10.7	Cristobal, C. Z.	Buenaventura, Col.	228	211	124
Saldas	18	9.05	27	6.05	27	13.21	27	17.18	American	390.0	54.0	18.10	Charleston, S. C.	San Diego, Cal.	2,020	258	211
Sirus	25	17.30	27	6.20	27	14.13	27	15.15	American	251.0	43.5	16.5	New York, N. Y.	Guayaquil, Ecuador	2,874	1,944	
Guayaquil	26	19.50	27	6.30	27	14.30	27	15.40	British	370.6	53.0	14.0	Norfolk, Va.	Portland, Oreg.			
Galicla	9.15	27	9.25	27	16.40	27	17.50			409.6	54.1	17.6	Baltimore, Md.	Los Angeles, Calif.	3,103	6,653	4,863
Martian Ohs	27	10.20	27	10.25	27	17.23	27	18.30	American	429.3	59.2	20.0	Tampa, Fla.	Los Angeles, Calif.	7,568	5,283	
Chandler	27	11.05	27	11.20	27	17.54	27	19.00	American	491.5	58.2	19.0	Portland, Oreg.	Portland, Oreg.	2,600	10,491	7,601
Atlantic Sun	22	21.20	27	12.45	27	19.30	27	20.20	British	215.0	33.5	16.5	Cristobal, C. Z.	Champerico, Guat.	1,001	1,270	735
Virginian	22	11.08	27	12.45	27	20.05	27	21.25	American	406.0	54.1	19.6	New York, N. Y.	Seattle, Wash.	2,675	6,627	4,993
Salvador	27	11.08	27	12.45	27	20.05	27	21.25	American	369.0	54.6	8.1	New York, N. Y.	Seattle, Wash.	2,675	6,627	4,993
Alvaroka	27	11.10	27	11.10	27	11.10	27	11.10	American	309.0	54.0	18.10	Cristobal, C. Z.	Balboa, C. Z.	6,127	10	10
Playmate	27	12.45	27	12.45	27	12.45	27	12.45	American	409.6	54.1	17.6	Cristobal, C. Z.	Balboa, C. Z.	6,127	10	10
Simba	27	12.45	27	12.45	27	12.45	27	12.45	American	409.6	54.1	17.6	Cristobal, C. Z.	Balboa, C. Z.	6,127	10	10

* Tanker.
 † Supply ship.
 ‡ Launch.
 § Motor ship.
 ¶ Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

City of	21	3.30	21	6.58	21	14.30	21	15.25	British	420.0	57.0	25.0	Tocopilla, Chile	Azores	9,470	6,988	5,140
Romney	21	3.30	21	6.58	21	14.30	21	15.25	British	420.0	57.0	25.0	Tocopilla, Chile	Azores	9,470	6,988	5,140
Fedenko	21	6.30	21	7.21	21	15.45	21	17.00	Yugoslav	420.6	54.7	25.2	Liquique, Chile	Azores	9,250	6,839	5,208
Ghivice	21	7.15	21	8.16	21	15.50	22	11.20	American	390.0	54.2	25.0	Seattle, Wash.	New York, N. Y.	7,025	6,182	4,433
Willmoto	21	8.45	21	9.44	21	17.35	21	17.55	American	423.9	54.2	24.0	Seattle, Wash.	Boston, Mass.	8,425	6,602	4,754
Sage Brush	21	10.10	21	10.50	21	18.05	21	18.05	American	420.5	53.9	23.0	Everett, Wash.	Newark, N. J.	6,250	6,755	4,750
Charles H.	21	11.10	21	12.39	21	19.10	22	1.38	American	483.0	63.9	23.0	Talcahuano, Chile	New York, N. Y.	3,989	11,680	7,442
Cramp	21	12.20	21	13.35	21	20.45	21	20.45	American	408.3	62.0	24.0	Los Angeles, Calif.	New York, N. Y.	13,700	10,084	7,388
Santa Clara	21	14.45	21	15.39	21	22.55	21	22.55	Swedish	419.0	52.6	24.0	Calata Buena, Chile	Azores	6,775	5,764	4,078
India Arrow	21	14.45	21	15.39	21	22.55	21	22.55	British	419.0	54.8	24.0	Victoria, B. C.	Azores	3,919	7,355	5,248
Murjek	21	10.55	22	6.14	22	14.45	22	14.45	American	599.4	70.3	31.0	Los Angeles, Calif.	New York, N. Y.	16,738	12,514	8,427
Corrientes	21	10.55	22	6.14	22	14.45	22	14.45	American	599.4	70.3	31.0	Los Angeles, Calif.	New York, N. Y.	16,738	12,514	8,427
Australis	21	20.40	22	6.57	22	14.55	22	14.55	American	425.0	57.3	25.0	Portland, Oreg.	New Orleans, La.	3,956	8,568	6,048
Edgar F.	22	1.00	22	7.27	22	16.10	22	16.10	German	412.6	55.1	25.0	Los Angeles, Calif.	Avonmouth, Eng.	8,327	6,589	4,435
Lockenbach	22	2.23	22	8.06	22	17.15	22	17.15	American	394.0	46.2	23.0	Portland, Oreg.	New Orleans, La.	3,514	3,934	2,643
Beiza	22	3.00	22	8.45	22	17.40	22	17.40	American	435.0	50.0	27.0	Portland, Oreg.	Providence, R. I.	9,846	7,602	5,337
Point Garda	22	6.00	22	9.25	22	19.05	22	20.30	British	407.3	53.3	24.0	Los Angeles, Calif.	Fuel oil	7,902	5,793	4,120
Algonquin	22	8.50	22	9.52	22	18.20	22	18.20	Norwegian	376.5	53.8	25.5	Antofagasta, Chile	Azores	6,600	6,256	4,663
Lylepark	22	9.30	22	11.04	22	19.50	23	00.20	Dutch	490.0	64.6	30.0	N. Westmin, B. C.	New York, N. Y.	10,092	11,724	8,266
Stemmeslad	22	8.00	22	12.02	22	20.25	23	00.50	British	426.5	56.7	27.0	Los Angeles, Calif.	Land End, Eng.	8,244	7,149	4,927
Scottish	22	12.40	22	14.09	22	20.50	23	6.10	American	360.3	51.7	23.1	New York, N. Y.	General	2,839	5,937	4,325
Border	22	12.50	22	14.24	22	21.20	23	11.00	British	215.0	33.5	14.1	Champerico, Guat.	Cristobal, C. Z.	477	1,270	735
Santa Elisa	21	13.40	22	15.03	22	22.10	23	11.00	American	448.0	58.0	26.2	San Francisco, Cal.	Brooklyn, N. Y.	435		
Salvador	21	13.40	22	15.03	22	22.10	23	11.00	American	448.0	58.0	26.2	San Francisco, Cal.	Brooklyn, N. Y.	435		
St. Michel	21	13.40	22	15.03	22	22.10	23	11.00	American	448.0	58.0	26.2	San Francisco, Cal.	Brooklyn, N. Y.	435		

* Tanker.
 † Motor ship.
 ‡ For orders.
 § Lumber, oil, and general.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Sacramento	22	14	00	22	15	18	23	9	00	American	380	53	24	0	New York, N. Y.	General lumber.	5,090	5,053
California	22	12	35	23	6	09	23	13	40	American	574	80	33	2	New York, N. Y.	General	5,090	24,506
Edwin	23	00	30	23	6	50	23	15	15	American	410	54	25	0	Longview, Wash.	Lumber	7,895	6,003
S. T. Dodd	23	6	30	23	7	15	23	16	45	American	425	57	28	0	Philadelphia, Pa.	Gasoline	8,330	7,431
Capevon Maru	23	1	30	23	8	09	23	19	05	Japanese	385	51	9	27	Dublin, Ireland	Wheat	7,800	6,209
Harry	23	2	00	23	8	43	23	18	25	American	448	60	30	0	Boston, Mass.	Lumber, general	8,179	9,262
Lukenbach	23	3	15	23	9	30	23	20	40	British	407	53	23	3	Astoria, Oreg.	Nitrates	7,940	5,803
Eldonpark	23	9	15	23	10	02	23	22	05	American	407	53	25	0	Boston, Mass.	General	7,164	7,156
Dakota	23	7	30	23	14	10	23	21	20	American	460	60	22	0	New York, N. Y.	General	5,583	5,806
Tai Ping Yang	23	15	25	23	16	13	24	11	30	Japanese	510	68	2	30	Halifax, N. S.	Crude oil	15,100	1,556
Canada	23	15	25	23	16	13	24	11	30	British	422	58	2	4	Valparaiso, Chile	General	2,947	7,764
Acocagua	23	21	10	24	6	45	24	14	10	Chilean	415	54	3	26	Vancouver, B. C.	General	7,660	9,947
Tacoma	23	20	24	24	6	45	24	15	10	British	425	56	0	27	Vancouver, B. C.	General	7,602	7,827
Gregalia	24	4	20	24	7	02	24	15	05	British	425	56	0	27	Vancouver, B. C.	Wheat	9,900	6,811
Koranton	24	10	10	24	10	31	24	18	25	British	412	55	0	28	Gibraltar	Wheat	8,329	7,082
Sidney M.	24	11	15	24	12	04	24	19	15	American	401	53	27	0	Baltimore, Md.	Horses, nitrates	680	3,079
Hauptman	15	21	35	24	12	28	24	20	35	Chilean	334	40	2	19	Genoa, Italy	Lumber, general	6,957	6,821
Cachapal	24	13	00	24	13	54	24	21	25	American	410	54	2	26	Charleston, S. C.	General	2,584	7,955
San Felipe	24	13	00	24	13	54	24	21	25	American	410	54	2	26	Charleston, S. C.	General	2,584	7,955
Port	24	15	20	24	16	53	25	11	40	British	481	62	3	27	London, England	General	7,196	10,821
Nicholson	24	15	20	24	16	53	25	11	40	British	481	62	3	27	London, England	General	7,196	10,821
Tsuyama Maru	24	15	40	25	6	15	25	13	30	Japanese	445	55	3	0	Manila, P. I.	General	8,268	7,553
George	25	3	30	25	6	50	25	14	45	Norwegian	425	55	3	0	Vancouver, B. C.	Wheat, general	8,268	7,553
Washington	25	3	30	25	6	50	25	14	45	Norwegian	425	55	3	0	Vancouver, B. C.	Wheat, general	8,268	7,553
Rangtane	25	6	00	25	13	18	25	20	00	British	532	70	2	30	Wellington, N. Z.	Frozen, general	7,314	18,203
Samuel	25	12	20	25	13	30	25	20	35	Norwegian	390	54	7	25	Vancouver, B. C.	General	6,958	6,822
Bakke	25	14	35	25	13	30	25	20	35	Norwegian	381	53	8	25	Vancouver, B. C.	Lumber	6,958	6,822
Fernmoor	25	14	35	25	13	30	25	20	35	Norwegian	381	53	8	25	Vancouver, B. C.	Lumber	6,958	6,822
Pueblo	25	22	30	26	6	35	26	11	55	American	340	49	0	24	Los Angeles, Calif.	Gasoline	5,900	4,613
Brant	26	8	50	26	9	35	26	6	15	Dutch	202	33	1	3	Cristobal, C. Z.	Coffee, cacao	499	1,182
Robin Gray	26	12	15	26	13	11	26	21	10	American	440	55	0	25	Seattle, Wash.	Coffee, cacao	7,778	7,472
Henry D.	26	13	15	26	13	55	26	22	00	American	356	51	6	26	Everett, Wash.	Lumber	5,500	5,367
Whitton	26	15	20	26	16	07	26	23	00	American	462	61	6	26	Vancouver, B. C.	General	8,212	9,139
Portland	26	17	20	26	18	26	27	11	40	German	327	34	14	0	Hamburg, Germany	General	331	1,572
Cerro	26	17	20	26	18	26	27	11	40	German	327	34	14	0	Hamburg, Germany	General	331	1,572
Ladwigshalen	1	16	17	00	7	11	27	13	30	British	393	54	3	28	Talcahuano, Chile	Nitrates, general	7,608	6,600
Adward	26	17	00	27	6	11	27	13	30	British	429	59	2	26	Los Angeles, Calif.	Gasoline	10,125	7,720
General Smuts	26	18	00	27	7	11	27	16	00	British	386	52	6	25	Portland, Oreg.	General	6,094	5,466

* Tanker. ** General and coconut oil. *** Motor ship. **** Launched. ***** Pulp, lumber, and general. ***** Cacao, rice, coffee, and hides.

Kansas.....	26	22	30	27	7	38	27	17	05	27	17	05	American.....	Amer.-Hawaiian Line.	404.6	53	9	26	0	Seattle, Wash.	Boston, Mass.	6,896	6,779	1,921	
Orbita.....	27	2	05	27	8	14	27	18	50	27	23	05	American.....	Pacific Steam Nav. Co.	550.3	67	3	29	2	Talcahuano, Chile	Liverpool, England	5,543	16,844	11,773	
Acahula.....	27	9	10	27	10	13	27	19	10	27	19	10	British.....	Pacific Steam Nav. Co.	215.7	33	5	14	0	Champerico, Guat.	Cristobal, C. Z.	537	1,273	706	
Caucha *.....	27	11	09	27	14	39	27	22	45	27	22	45	Colombian.....	National Navigation Co.	107.0	22	9	10	0	Buenaventura, Col.	Cristobal, C. Z.	133	262	161	
San Marcos.....	27	11	19	27	14	49	27	22	45	27	22	45	American.....	Q. W. Line.	410.0	54	0	26	0	Portland, Oreg.	Philadelphia, Pa.	6,642	6,755	4,895	
Simba *.....	27	11	19	27	14	49	27	22	45	27	22	45	American.....	C. W. Meissner.....	21.0	7	0			Miraflores Lake.	Cristobal, C. Z.	Ballast.....		2	

* Coffee, hides, wood, and boulders.

* Coffee, machinery, and gold.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.													* DEPARTURES.												
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—																		
December 21.....	Colombia.....	Royal Netherlands S. S. Co.	Amsterdam via waypts.	December 21.....	Cordoba C-40 *.....	Scandia Airplane Co.	Barranquilla and waypts.																		
December 21.....	Ului.....	United Fruit Co.	Port Limon, Costa Rica.	December 21.....	Bridgetown.....	Colombian S. S. Line.	New York via waypts.																		
December 22.....	William.....	Lykes Brothers.....	Port Limon, Costa Rica.	December 21.....	No. 969-M *.....	Pan American Airways	Miami via wayports.																		
December 22.....	Darien C-35 *.....	Scandia Airplane Co.	Barranquilla and waypts.	December 21.....	No. 9685 *.....	Pan American Airways	San Salvador and waypts.																		
December 22.....	No. 9670 *.....	Pan American Airways	San Salvador and waypts.	December 21.....	Ului.....	United Fruit Co.	New York via Habana.																		
December 22.....	Calamares.....	United Fruit Co.	New York via Habana.	December 21.....	Cristobal.....	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.																		
December 23.....	Orinoco.....	Hamburg-American Line.	Hamburg via wayports.	December 21.....	Panama R. S. S. Line.	Panama R. S. S. Line.	Colon, Rep. of Panama.																		
December 23.....	No. 945-M *.....	Pan American-Grace Airways	New York via wayports.	December 22.....	William.....	Lykes Brothers	Georgetown.																		
December 24.....	Triona.....	United Fruit Co.	New York via Kingston.	December 22.....	Orinoco.....	Hamburg-American Line	Port Limon, Costa Rica.																		
December 24.....	Manuel Arnus.....	Spanish S. S. Line.	Barcelona via wayports.	December 24.....	No. 9638 *.....	Pan American Airways	San Salvador and waypts.																		
December 24.....	Flandre.....	Pan American Airways	Havana via wayports.	December 24.....	Calamares.....	United Fruit Co.	Port Limon, Costa Rica.																		
December 24.....	No. 9685 *.....	Pan American Airways	San Salvador and waypts.	December 25.....	Zacapa.....	United Fruit Co.	Venezuela and wayports.																		
December 25.....	Bolivar.....	Pan American Airways	Miami via wayports.	December 25.....	Mamel Arnus.....	Spanish S. S. Line.	New York via wayports.																		
December 25.....	No. 9685 *.....	Pan American Airways	New York via wayports.	December 25.....	Triona.....	United Fruit Co.	Port Limon, Costa Rica.																		
December 25.....	Alantide.....	Colombian S. S. Line.	New York via wayports.	December 26.....	Flandre.....	French Line.	Havre via wayports.																		
December 25.....	Reliance.....	Hamburg-American Line.	New Orleans and waypts.	December 26.....	Darien C-35 *.....	Pan American Airways	San Salvador and waypts.																		
December 26.....	Francisco.....	Standard Fruit & S. S. Co.	New Orleans and waypts.	December 26.....	Levyland S. S. Line.	Scandia Airplane Co.	Barranquilla and waypts.																		
December 27.....	Kingholm.....	United States Line.	Philadelphia and waypts.	December 26.....	Rehance.....	Hamburg-American Line	Port Limon, Costa Rica.																		
December 27.....	Triona.....	Swedish-American Line.	New York via wayports.	December 27.....	Triona.....	United Fruit Co.	New Orleans and waypts.																		
December 27.....	Orinoco.....	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	December 27.....	Kingholm.....	Swedish-American Line.	New York via wayports.																		
December 27.....	No. 405-N *.....	Hamburg-American Line	Port Limon, Costa Rica.																						
December 27.....	No. 9685 *.....	Pan American-Grace Airways	Talara via wayports.																						
December 27.....	No. 9685 *.....	Pan American Airways	San Salvador and waypts.																						
December 27.....	No. 9693-M *.....	Pan American Airways	Miami via wayports.																						

PORT OF BALBOA.

December 22.....	La Placencia.....	Union Oil Co. of Calif.	Los Angeles, Calif.	December 24.....	La Placencia.....	Union Oil Co. of Calif.	Los Angeles, Calif.
December 26.....	Saramacca.....	United Fruit Co.	San Francisco, Calif.	December 27.....	Saramacca.....	United Fruit Co.	San Francisco, Calif.
December 26.....	Nueva Panama *.....	Hans Eliott.....	Panama, R. P.	December 27.....	Nueva Panama *.....	Hans Eliott.....	Panama, R. P.
December 26.....	Libertador *.....	A. Valdez.....	Panama, R. P.	December 26.....	Libertador *.....	A. Valdez.....	Panama, R. P.
December 26.....	Sambu *.....	Hans Eliott.....	Panama, R. P.	December 26.....	Sambu *.....	Hans Eliott.....	Panama, R. P.
December 26.....	Real *.....	Hans Eliott.....	Panama, R. P.	December 26.....	Real *.....	Hans Eliott.....	Panama, R. P.
December 26.....	Clamarina *.....	A. Valdez.....	Panama, R. P.	December 26.....	Clamarina *.....	A. Valdez.....	Panama, R. P.

* Motor ship.

* Motor boat.

* Other than ships passing through the Canal.

Supplement No. 4.—Departmental Tariff "G".

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
BALBOA HEIGHTS, C. Z., December 22, 1930.

ITEM 1.—MOTOR VEHICLES, TRACTORS AND TRAILERS.

(Effective January 1, 1931.)

Par. 1.—Add:

Assignment of unserviced* cars or trucks without chauffeurs:
Special assignment in outlying districts of unserviced Ford truck
or equivalent may be made with the approval of the Chief Quarter-
master. per month. . . \$20.00
Minimum charge to be for one month.

*NOTE.—The cost of gasoline, oil and repairs will be borne by the division
operating the truck. All repairs are to be performed by the Motor
Transportation Division. The equipment must be returned in as good
condition as received, except for normal depreciation.

ITEM 27.—ELECTRIC CURRENT.

(Effective December 1, 1930.)

Par. 7.—Add:

(d) Electric refrigerators, not exceeding 10 cu. ft., each, per month. . . . \$1.50
(Special rates on larger sizes.)

J. L. SCHLEY,
Acting Governor, The Panama Canal.
2d Vice President, Panama Railroad Co.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Cristobal, C. Z., for Week Ending December 27, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cristobal	Panama R. R. S. S. Line		December 21.		715
Durazzo	Hamburg-American Line		December 21.		227
Cauca	National Navigation Co.		December 21.		318
Bridgetown	United Fruit Co.		December 21.		318
Colombia	Royal Netherlands S. S. Co.	December 21.	December 21.	25	(²)
Ulua	United Fruit Co.	December 21.	December 21.	29	60
Santa Clara	Grace Line	December 21.	December 22.	94	(²)
Colonial	T. & J. Harrison	December 22.	December 22.	276	(²)
William	Aluminium Line	December 22.	December 22.	181	(²)
Delftdijk	Holland-America Line	December 22.	December 23.	(²)	117
Salvador	Pacific Steam Navigation Co.	December 22.	December 27.	477	1,061
Santa Elisa	Grace Line	December 22.	December 23.	121	(²)
Citalina	E. Garcia	December 22.	December 23.	(²)	9
Calamares	United Fruit Co.	December 22.	December 24.	476	23
Orinoco	Hamburg-American Line	December 23.	December 24.	456	(²)
Tai Ping Yang	Barber S. S. Line	December 23.	December 24.	437	(²)
Orazio	Italian Line	December 23.	December 25.	221	(²)
Aconcagua	Chilean Line	December 24.	December 24.	32	(²)
Manuel Arnus	Spanish Line	December 24.	December 25.	108	221
Benekom	Royal Netherlands S. S. Co.	December 24.	December 25.	195	153
Flandre	French Line	December 24.	December 25.	93	437
Iriona	United Fruit Co.	December 24.	December 25.	1,485	(²)
Zacapa	United Fruit Co.	December 24.	December 25.	587	528
Tsuyama Maru	Nippon Yusen Kaisha	December 25.	December 25.	202	(²)
Santa Barbara	Grace Line	December 25.	December 25.	10	25
Bolivar	Colombian S. S. Line	December 25.	December 27.	3	626 ¹
Guayquil	Panama R. R. S. S. Line	December 25.	December 27.	857	9
George Washington	Fred Olsen Line	December 25.	December 25.	(²)	149
Nevisian	Leyland S. S. Line	December 25.	December 26.	354	(²)
Caldas	National Navigation Co.		December 26.		200
California	Nav. Libera-Triestina	December 26.	December 26.	19	(²)
Atlantida	Standard Fruit & S. S. Co.	December 26.		89	
Baralt	Royal Netherlands S. S. Co.	December 26.		497	
Portland	Hamburg-American Line	December 26.	December 27.	54	(²)
Nosa Chief	N. O. & S. A. S. S. Co.	December 27.		176	
Cerigo	Hamburg-American Line	December 27.		364	
Colombia	Royal Netherlands S. S. Co.	December 27.		17	
Cauca	National Navigation Co.	December 27.		212	
Cid	Pacific Steam Navigation Co.	December 27.		114	
Acajutla	Pacific Steam Navigation Co.	December 27.		537	
Orbita	Pacific Steam Navigation Co.	December 27.	December 27.	17	33

¹ No cargo discharged² No cargo laded³ 1 package.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective December 20, 1930.

Commodities.	Unt.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb.	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulfridon Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulfridon No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulfridon, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.12
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Coal.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$7.25 per ton of 2,240 pounds at Cristobal, and \$10.25 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending December 27, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Chateau Thierry.....	U. S. Army.....	December 10..	December 12..	1,523	470
La Perla.....	United Fruit Co.....	December 12..	December 12..	710	35
President Johnson.....	Dollar Line.....	December 12..	December 12..	1	3
Cambrai.....	U. S. Army.....	December 11..	December 12..	225	42
Nosa King.....	N. O. & S. A. S. S. Co.....	December 14..	December 14..	2	226
Losado.....	Pacific Steam Navigation Co.....	December 14..	December 14..		51
Venezuela.....	Panama Mail S. S. Co.....	December 16..	December 17..	341	30
City of Panama.....	Panama Mail S. S. Co.....	December 16..	December 20..	291	52
El Salvador.....	Panama Mail S. S. Co.....	December 17..	December 18..	84	292
San Jose.....	United Fruit Co.....	December 18..	December 19..	293	30
Benjamin Franklin.....	Fred Olsen & Co.....	December 19..	December 19..	1,551	
Santa Teresa.....	Grace Line.....	December 20..	December 20..	52	4
Axel Johnson.....	Johnson Line.....	December 20..	December 20..	134	
La Placencia.....	Union Oil Co.....	December 22..	December 24..	286	18
Tai Ping Yang.....	Barber S. S. Line.....	December 22..	December 24..	316	
Pennsylvania.....	Panama-Pacific Line.....	December 26..	December 26..		181

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors.

The rates are as follows:

(a) For handling cargo from ship's side to storage place, \$1 per ton of 2,000 pounds or 40 cubic feet on general merchandise, and one-half of the transfer rates provided by Item 34, Panama Canal Tariff No. 10, on other commodities.

(b) For handling cargo from storage place to ship's side, *i. e.*, for delivering or reforwarding it, the same rates as for receiving and storing, as per (a), above. The minimum charge for handling any shipment taken out of storage is \$1.

(c) For storage: First 35 days free; thereafter, 3 cents per day or fraction thereof per ton of 2,000 pounds or 1½ cents per day or fraction thereof per ton of 40 cubic feet.

Special rates on special commodities in large quantities may be obtained on request.

Various lines operating out of Cristobal and Balboa to the west coast of Central and South America will accept their proportion of the through rate for the haul beyond the Isthmus, as explained in the following paragraph:

By virtue of the Canal Zone for Orders arrangement shippers are enabled to consign cargo to the Isthmus and subsequently to reassign it to any port beyond the Isthmus to which there is a through rate from port of origin without sacrificing their right to the through freight rate. This means that when a shipment moves from, say, New York to the Canal Zone, usual local rates will be charged to Cristobal or Balboa, as the case may be; but should the owner wish to reforward to any other port to which there is a through rate from port of origin, he may do so upon payment of the receiving carrier's proportion of the through rate from port of origin to port of ultimate destination, and upon evidence that the shipment, or any part of it, has moved beyond the Isthmus, the initial carrier will refund the difference between its proportion of the through rate applicable and the local rate.

In addition to reassigning beyond the Isthmus, cargo billed Cristobal for Orders may be reassigned to Panama City or line points on the Panama Railroad on the basis of through rates from port of origin to Panama City. In this case the Panama Railroad Company's charges will be the difference between the rate charged to Cristobal by the ocean carrier and the through rate from port of origin to Panama City, and the necessary adjustments with the ocean carrier will be made by the Panama Railroad Company without inconvenience to shippers or consignees. The handling charge from storage place to cars is the same as from storage place to ship's side.

Cargo deposited in Hold for Orders Warehouse, Cristobal, which consignees desire transferred to Hold for Orders Warehouse, Balboa, will be assessed a charge of \$1 per ton on general cargo and one-half the transfer rates on other commodities for handling from the warehouse into cars at Cristobal, and a second charge of the same kind for handling from cars into warehouse at Balboa. The same charge will again apply when the cargo is reforwarded from, or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on Hold for Orders cargo discharged from vessels at Balboa.

Cargo consigned to Hold for Orders, Balboa, arriving at Cristobal piers, and/or cargo consigned to Hold for Orders, Cristobal, on which by previous arrangement the destination has been changed to Hold for Orders, Balboa, prior to arrival of the vessel, will be assessed one handling charge of \$1 per ton on general cargo or one-half of the transfer rates on other commodities for handling from shipside across piers and into cars at Cristobal and from cars into the Hold for Orders Warehouse, Balboa. The same charge will apply when the cargo is reforwarded from or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on cargo moving in the opposite direction.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," will be supplied on request to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.
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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., January 7, 1931. No. 23.

Canal Traffic for Calendar Year 1930.

The total number of commercial vessels transiting the Canal during the calendar year ended December 31, 1930, aggregated 5,885, and the total tolls collection was \$26,146,024.96. The number of transits declined 545, or 8.5 per cent, in comparison with the calendar year 1929, while tolls collections decreased \$1,446,690.88, or 5.2 per cent. The lower percentage of decrease in tolls in comparison with the decrease in number of transits was caused by the greater average tonnage of the vessels transiting in 1930.

The month of the greatest traffic in 1930 was January with 531 transits and \$2,360,211.24 in tolls, while September contributed the lowest with 458 transits and \$2,057,103.58 in tolls. The decrease in Canal traffic is attributed to the existing world-wide adverse business conditions.

The daily average number of commercial transits during the year was 16.12, as compared with 17.62 in the calendar year 1929, and 17.31 for the calendar year 1928. The daily average tolls collection in 1930 amounted to \$71,632.95, as compared with \$75,596.48 in the calendar year 1929 and \$72,065.46 in 1928.

In the following tabulation, the number of commercial transits and the amount of tolls collected are shown for the calendar year 1930, with the daily averages of transits and tolls, with comparative totals for the calendar years 1929, and 1928, and the fiscal year ended June 30, 1930.

	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January.....	531	\$2,360,211.24	17.13	\$76,135.84
February.....	491	2,131,386.12	17.54	76,120.93
March.....	515	2,260,002.36	16.61	72,903.30
April.....	489	2,232,763.00	16.30	74,425.43
May.....	479	2,162,898.60	15.45	69,770.92
June.....	478	2,100,994.53	15.93	70,033.15
July.....	488	2,180,511.82	15.74	70,339.09
August.....	465	2,080,230.42	15.00	67,104.21
September.....	458	2,057,103.58	15.26	68,570.12
October.....	517	2,288,982.08	16.68	73,838.13
November.....	479	2,098,357.36	15.96	69,945.25
December.....	495	2,192,583.85	15.97	70,728.51
Total, calendar year, 1930.....	5,885	26,146,024.96	16.12	71,632.95
Total, calendar year, 1929.....	6,430	27,592,715.84	17.62	75,596.48
Total, calendar year, 1928.....	6,334	26,375,962.41	17.31	72,065.46
Total, fiscal year, 1930.....	6,185	27,076,890.01	16.95	74,183.26

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, January 3, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Gullmarn ²	18	6.10	28	6.00	28	16.53			Swedish.	A. Johanssen.	34.0	14.0	5.6	Gothenburg, Sweed.	Sydney, Australia.	Ballast.	12	5.480	
Barak.	26	17.20	28	6.15	28	13.30	28	14.52	Dutch.	Royal Neth. S. S. Co.	200.0	33.1	11.8	Cristobal, C. Z.	Guayaquil, Ecuador	General.	1,483	7,329	
Cid.	27	12.10	28	6.00	28	13.28	28	19.07	British.	Pacific Steam Nav. Co.	264.8	41.2	14.0	New York, N. Y.	Guayaquil, Ecuador	General.	351	1,626	
Chilore.	27	19.00	28	6.15	28	14.25	28	15.35	American.	Ore S. S. Corp.	549.0	72.0	23.0	Baltimore, Md.	Cruz Grande, Chile	Ballast.	14,533	4,480	
Tuscaloosa																			
City	28	1.25	28	7.20	28	14.34	28	15.35	American.	Isthmian S. S. Lines.	424.2	56.2	25.0	Baltimore, Md.	Vancouver, B. C.	Gen., steel, etc.	7,350	7,611	
Justin.	28	3.30	28	7.25	28	15.13	28	16.20	German.	North German Lloyd.	449.0	56.0	18.0	Hamburg, Germany	Vancouver, B. C.	Ballast.	9,383	5,799	
Sanyo Maru ²	28	8.15	28	8.50	28	15.39	28	16.20	Japanese.	Osaka Shosen Kaisha.	446.0	60.5	22.6	Boston, Mass.	Hongkong, China.	General.	3,498	8,942	
Manatoway ¹	28	8.35	28	8.55	28	16.45	28	17.50	American.	Union Oil Co.	390.0	54.2	18.6	Baltimore, Md.	Los Angeles, Calif.	Ballast.	6,205	4,359	
Navasota.	28	6.40	28	9.55	28	17.25	28	18.59	British.	Royal Mail S. P. Co.	430.0	61.3	20.0	Rotterdam, Holl'd.	Seattle, Wash.	Ballast.	9,475	6,176	
Cargo.	27	11.10	28	12.10	28	20.20	28	21.29	German.	Hamburg-American Line.	227.2	34.4	14.10	Cristobal, C. Z.	Guayaquil, Ecuador	General.	112	1,572	
Dinteldijk ²	28	00.15	28	12.50	28	21.05	28	22.07	Dutch.	Holland-America Line.	485.0	62.0	19.9	Rotterdam, Holl'd.	Portland, Oreg.	Gen., bananas.	1,398	10,786	
Nitokris.	28	00.25	28	13.15	28	22.00	28	23.05	German.	Hamburg-American Line.	410.9	50.9	24.1	Hamburg, Germany	Valparaiso, Chile	General.	3,059	6,652	
Nosa Chief.	27	20.00	28	13.55	28	22.34	28	23.38	American.	N. O. & S. A. S. S. Co.	300.0	45.0	21.0	Pensacola, Fla.	Valparaiso, Chile	General.	2,372	3,256	
Major Pullen ¹ .																			
Jacob																			
Lukenbach.	28	21.00	29	6.20	29	13.53	29	15.30	American.	Lukenbach Line.	434.0	57.7	22.10	New Orleans, La.	Tacoma, Wash.	General.	5,026	7,982	
Tongking ²	29	12.50	29	13.00	29	20.18	30	10.50	Danish.	East Asiatic Co.	410.0	55.0	17.0	Hamburg, Germany	Vancouver, B. C.	General.	2,234	7,013	
Nyanza.	29	18.30	29	20.45	30	9.34	30	10.40	British.	MacLay & McIntyre.	402.0	52.0	15.0	Boston, Mass.	Vancouver, B. C.	Ballast.	5,583	4,073	
Onondaga.	30	1.55	30	6.20	30	13.33	30	15.00	American.	Ford Motor Co.	251.0	43.6	19.0	Chester, Pa.	San Francisco, Cal.	Auto. parts.	2,493	2,656	
Talapooga ¹ .	28	13.45	30	6.00	30	13.25	2	7.35	American.	U. S. Government.	165.10	32.0		High seas.	Balboa, C. Z.	Ballast.			
Steel Mariner.	30	4.20	30	6.25	30	14.30	30	18.55	American.	Isthmian S. S. Lines.	424.0	56.0	24.10	Baltimore, Md.	Honolulu, T. H.	General, steel.	7,966	7,611	
David																			
McKelvey ²	30	6.10	30	7.10	30	14.53	30	16.00	American.	Tidewater Oil Co.	430.0	59.2	19.6	New York, N. Y.	Pt. San Luis, Calif.	Ballast.	7,629	5,325	
Port Victor.	30	6.55	30	7.25	30	15.34	30	18.55	British.	Coth & Dom. Line.	470.0	55.0	22.6	New York, N. Y.	Fremantle, Aus'la.	General.	2,133	9,336	
Guatemala.	29	00.25	30	9.00	30	15.51	31	13.50	American.	Panama Mail S. S. Co.	390.0	51.6	23.0	New York, N. Y.	San Francisco, Cal.	Coffee, general.	1,818	5,776	
Este.	30	5.10	30	10.30	30	16.57	30	18.05	German.	North German Lloyd.	460.0	63.8	23.7	Bremen, Germany.	Portland, Oreg.	General.	3,498	9,965	
American.	30	10.50	30	11.00	30	18.55	30	19.55	American.	Amer.-Hawaiian Line.	401.7	54.2	17.0	Boston, Mass.	Seattle, Wash.	General.	1,842	6,777	
West.Ira.	29	21.45	30	12.00	30	18.36	30	19.30	American.	McCormick S. S. Co.	410.5	53.9	19.0	Buenos Aires, Arg.	Tacoma, Wash.	General.	6,230	6,753	
Pacific																			
Enterprise ²	29	8.35	30	13.00	30	20.09	30	21.15	British.	Furness, Withy & Co.	435.9	60.0	18.3	Glasgow, Scotland.	Vancouver, B. C.	Gen., bananas.	956	9,641	
Holystone.	30	18.05	30	18.25	31	9.36	31	11.05	British.	Dale, Vancouver.	397.4	54.0	12.0	Tyne, England.	Vancouver, B. C.	Ballast.	5,843	4,268	
Anbuetan ¹	30	21.40	31	6.10	31	13.16	31	14.40	American.	Shell Eastern Pet. Co.	435.0	56.2	23.0	Fall River, Mass.	San Francisco, Cal.	Ballast.	7,426	5,073	
Stonepool.	31	00.40	31	6.20	31	14.12	31	15.30	British.	Pool Shipping Co.	405.0	53.5	15.6	Oran, Algeria.	Vancouver, B. C.	Ballast.	5,303	4,212	
Sally																			
Maersk ²	31	7.00	31	7.35	31	14.58	31	16.05	Danish.	Abrahamsen Moller.	332.1	44.2	15.10	Baltimore, Md.	Manila, P. I.	General.	1,933	3,518	
Walter A.																			
Lukenbach.	31	4.15	31	7.45	31	15.19	31	16.20	American.	Lukenbach Line.	446.5	56.1	19.6	Boston, Mass.	Seattle, Wash.	General.	2,667	8,785	

¹ Coast Guard cutter.

² Motor ship.

³ Launch.

⁴ Tanker.

Origin	Destination	Company	Agent	Remarks
Brimanger	Vancouver, B. C.	Westfal, Larsen & Co.	31 15.20 31 15.35 31 22.38	Coffee, corn, etc. 3,957 6,853 5,246
Atlantic City	Vancouver, B. C.	Reardon Smith Line.	1 10.26 British.	Ballast. 6,555 4,659
Orta	Vancouver, B. C.	Pacific Steam Nav. Co.	1 13.34 1 14.30 American.	General. 3,084 9,936 6,561
San Bernardino	Valparaiso, Chile.	States S. S. Co.	1 15.00 American.	General. 4,363 6,561 4,873
Empire Star	Seattle, Wash.	Blue Star Line.	1 14.12 1 15.08 British.	Ballast. 7,744 5,621
Vancouver	Talara, Peru.	Imperial Oil Co.	1 16.30 British.	Ballast. 11,573 7,711
Vancouver	Huachuco, Peru.	Shepard S. S. Co.	1 19.30 1 22.07	General. 2,900 6,558 4,753
King City	Vancouver, B. C.	Reardon Smith Line.	1 14.40 1 14.50	Ballast. 6,993 5,397
Crossington	Vancouver, B. C.	Haldin & Phillips, Ltd.	1 20.25 1 20.55	Ballast. 7,073 5,308
Esparita	San Francisco, Cal.	United Fruit Co.	31 14.80 2 13.24 3 15.35	Ballast. 3,683 2,373
Creole	Balboa, C. Z.	Venezuela Gulf Oil Co.	2 13.31	Ballast. 7,106 5,068
Bueno	Los Angeles, Calif.	Demaree Freres.	1 22.45 2 6.20	General. 5,365 7,972 5,657
Monique	Kobe, Japan.	Nippon Yusen Kaisha.	2 14.46 2 14.46	Gen. sulphur. 5,690 5,690 4,125
Takeoyo Maru	Seattle, Wash.	Redwood Line.	2 9.30 2 9.45	Ballast. 5,690 5,690 4,125
Mahama	Vancouver, B. C.	Blue Star Line.	2 10.25 2 10.35	Ballast. 3,683 2,373
Royal Star	Talara, Peru.	Baltic-Amer. Pet. Co.	2 17.30 2 17.30	Ballast. 159 262 161
Henrich V.	Buenaventura, Col.	National Navigation Co.	2 19.45 2 19.55	General. 2,581 3,984 2,628
Riesdemann	Seattle, Wash.	Carl Legien	2 13.15 2 13.25	General. 3,805 7,145 5,474
Canca	Valparaiso, Chile.	Hamburg-American Line	1 22.15 2 15.25	Lubricating oil. 1,572 7,060 9,025
Chetopa	San Francisco, Cal.	Tidewater Oil Co.	3 9.03 3 9.03	Ballast. 11,819 8,367
Carl Legien	Los Angeles, Calif.	Shaw, Savill & Albion.	2 17.40 3 6.10	Towing barge.
Solana	Los Angeles, Calif.	U. S. Navy.	2 16.20 3 6.10	Ballast. 10,780 9,855
Zealandic	Los Angeles, Calif.	International Pet. Co.	2 20.35 3 7.15	Cotton, general. 5,180 8,693 8,469
Sietoa	Manila, P. I.	Tampa Luteroean Co.	3 6.05 3 7.45	General. 3,340 11,443 8,469
C. O. Stillman	Wellington, N. Z.	N. Z. Shipping Co.	3 7.10 3 8.25	General. 456 1,105 698
Scottsburg	Guaymas, Mex.	Roland Line.	3 11.10 3 8.50	General. 1,654 8,567 6,020
Rhine	Portland, Ore.	Oakland S. S. Co.	3 9.40 3 9.40	General. 132 1,273 706
West Lynn	Boston, Mass.	Amer-Hawaiian Line.	3 12.20 3 12.40	General. 2,465 6,255 4,099
Missourian	Los Angeles, Calif.	Pacific Steam Nav. Co.	3 12.20 3 15.16	Ballast.
Acapulca	Valparaiso, Chile.	Grace Line.	27 18.00 3 15.16	Ballast.
Santa Rita	Valparaiso, Chile.	United Fruit Co.	2 20.43 3 15.50	Ballast.
No. 31051	Valparaiso, Chile.	United Fruit Co.	2 20.43 3 15.50	Ballast.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Origin	Destination	Company	Agent	Remarks
Roosevelt	Brisbane, Australia	Roosevelt S. S. Co.	401 9 54.2 26.0	Nitrates. 7,055 6,972 5,092
Chilean Nitrate Prod.	Junin, Chile	Fern Line.	448 3 59.2 27.0	Lumber. 11,200 8,530 6,246
Ore S. S. Corp.	Cruz Grande, Chile	Ore S. S. Corp.	561 1 72.2 24.0	Iron ore. 5,637 6,615 4,851
DuPont de Nemours	Tocopilla, Chile	Norton, Lilly & Co.	350 8 53.9 26.0	Nitrates of soda. 22,638 15,424 4,221
Standard Transp. Co.	Noromea, N. Calif.	Standard Transp. Co.	468 3 52.2 25.0	Chrom. ore. 7,903 6,257 4,307
Sun Oil Co.	Los Angeles, Calif.	Sun Oil Co.	477 1 60.0 27.0	Gasoline. 13,518 9,630 6,476
U. S. Navy	Los Angeles, Calif.	Ford Motor Co.	250 5 45.8 20.0	Fuel oil. 10,783
Isthmian S. S. Lines	Marchfield, Ore.	Isthmian S. S. Lines	405 0 52.0 26.0	Lumber. 2,040 2,676 1,797
	Tocopilla, Chile.			Nitrates. 7,500 6,220 4,432

7 Barge.

6 Tug.

5 For dry-docking.

4 Tanker.

3 Barge.

2 Tug.

1 For dry-docking.

0 Tanker.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Origin	Destination	Company	Agent	Remarks
Seminole	Seattle, Wash.	Seminole S. S. Co.	26 20.45 28 14.50 28 15.35	General. 2,900 6,558 4,753
Pergel	Seattle, Wash.	Pergel S. S. Co.	28 10.25 28 11.10 28 11.55	General. 2,900 6,558 4,753
Svealand	Seattle, Wash.	Svealand S. S. Co.	28 17.45 28 18.30 28 19.15	General. 2,900 6,558 4,753
Nordol	Seattle, Wash.	Nordol S. S. Co.	29 1.30 29 2.15 29 3.00	General. 2,900 6,558 4,753
Ashborton	Seattle, Wash.	Ashborton S. S. Co.	29 6.30 29 7.15 29 8.00	General. 2,900 6,558 4,753
Japan Arrow	Seattle, Wash.	Japan Arrow S. S. Co.	29 10.00 29 10.45 29 11.30	General. 2,900 6,558 4,753
Sun	Seattle, Wash.	Sun S. S. Co.	29 11.00 29 11.45 29 12.30	General. 2,900 6,558 4,753
Salthas	Seattle, Wash.	Salthas S. S. Co.	29 12.00 29 12.45 29 13.30	General. 2,900 6,558 4,753
Lake Benbow	Seattle, Wash.	Lake Benbow S. S. Co.	29 13.00 29 13.45 29 14.30	General. 2,900 6,558 4,753
San Francisco	Seattle, Wash.	San Francisco S. S. Co.	29 14.35 29 15.20 29 16.05	General. 2,900 6,558 4,753

3 Barge.

2 Tug.

1 For dry-docking.

0 Tanker.

2 Barge.

1 Tug.

0 For dry-docking.

0 Tanker.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Origin	Destination	Company	Agent	Remarks
Roanoke	Seattle, Wash.	Roanoke S. S. Co.	26 20.45 28 14.50 28 15.35	General. 2,900 6,558 4,753
Chilean Nitrate Prod.	Junin, Chile	Fern Line.	448 3 59.2 27.0	Nitrates. 7,055 6,972 5,092
Ore S. S. Corp.	Cruz Grande, Chile	Ore S. S. Corp.	561 1 72.2 24.0	Iron ore. 5,637 6,615 4,851
DuPont de Nemours	Tocopilla, Chile	Norton, Lilly & Co.	350 8 53.9 26.0	Nitrates of soda. 22,638 15,424 4,221
Standard Transp. Co.	Noromea, N. Calif.	Standard Transp. Co.	468 3 52.2 25.0	Chrom. ore. 7,903 6,257 4,307
Sun Oil Co.	Los Angeles, Calif.	Sun Oil Co.	477 1 60.0 27.0	Gasoline. 13,518 9,630 6,476
U. S. Navy	Los Angeles, Calif.	Ford Motor Co.	250 5 45.8 20.0	Fuel oil. 10,783
Isthmian S. S. Lines	Marchfield, Ore.	Isthmian S. S. Lines	405 0 52.0 26.0	Lumber. 2,040 2,676 1,797
	Tocopilla, Chile.			Nitrates. 7,500 6,220 4,432

3 Barge.

2 Tug.

1 For dry-docking.

0 Tanker.

2 Barge.

1 Tug.

0 For dry-docking.

0 Tanker.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Origin	Destination	Company	Agent	Remarks
Roanoke	Seattle, Wash.	Roanoke S. S. Co.	26 20.45 28 14.50 28 15.35	General. 2,900 6,558 4,753
Chilean Nitrate Prod.	Junin, Chile	Fern Line.	448 3 59.2 27.0	Nitrates. 7,055 6,972 5,092
Ore S. S. Corp.	Cruz Grande, Chile	Ore S. S. Corp.	561 1 72.2 24.0	Iron ore. 5,637 6,615 4,851
DuPont de Nemours	Tocopilla, Chile	Norton, Lilly & Co.	350 8 53.9 26.0	Nitrates of soda. 22,638 15,424 4,221
Standard Transp. Co.	Noromea, N. Calif.	Standard Transp. Co.	468 3 52.2 25.0	Chrom. ore. 7,903 6,257 4,307
Sun Oil Co.	Los Angeles, Calif.	Sun Oil Co.	477 1 60.0 27.0	Gasoline. 13,518 9,630 6,476
U. S. Navy	Los Angeles, Calif.	Ford Motor Co.	250 5 45.8 20.0	Fuel oil. 10,783
Isthmian S. S. Lines	Marchfield, Ore.	Isthmian S. S. Lines	405 0 52.0 26.0	Lumber. 2,040 2,676 1,797
	Tocopilla, Chile.			Nitrates. 7,500 6,220 4,432

3 Barge.

2 Tug.

1 For dry-docking.

0 Tanker.

2 Barge.

1 Tug.

0 For dry-docking.

0 Tanker.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Origin	Destination	Company	Agent	Remarks
Roanoke	Seattle, Wash.	Roanoke S. S. Co.	26 20.45 28 14.50 28 15.35	General. 2,900 6,558 4,753
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Ore S. S. Corp.	Cruz Grande, Chile	Ore S. S. Corp.	561 1 72.2 24.0	Iron ore. 5,637 6,615 4,851
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Isthmian S. S. Lines	Marchfield, Ore.	Isthmian S. S. Lines	405 0 52.0 26.0	Lumber. 2,040 2,676 1,797
	Tocopilla, Chile.			Nitrates. 7,500 6,220 4,432

3 Barge.

2 Tug.

1 For dry-docking.

0 Tanker.

2 Barge.

1 Tug.

0 For dry-docking.

0 Tanker.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Origin	Destination	Company	Agent	Remarks
Roanoke	Seattle, Wash.	Roanoke S. S. Co.	26 20.45 28 14.50 28 15.35	General. 2,900 6,558 4,753
Chilean Nitrate Prod.	Junin, Chile	Fern Line.	448 3 59.2 27.0	Nitrates. 7,055 6,972 5,092
Ore S. S. Corp.	Cruz Grande, Chile	Ore S. S. Corp.	561 1 72.2 24.0	Iron ore. 5,637 6,615 4,851
DuPont de Nemours	Tocopilla, Chile	Norton, Lilly & Co.	350 8 53.9 26.0	Nitrates of soda. 22,638 15,424 4,221
Standard Transp. Co.	Noromea, N. Calif.	Standard Transp. Co.	468 3 52.2 25.0	Chrom. ore. 7,903 6,257 4,307
Sun Oil Co.	Los Angeles, Calif.	Sun Oil Co.	477 1 60.0 27.0	Gasoline. 13,518 9,630 6,476
U. S. Navy	Los Angeles, Calif.	Ford Motor Co.	250 5 45.8 20.0	Fuel oil. 10,783
Isthmian S. S. Lines	Marchfield, Ore.	Isthmian S. S. Lines	405 0 52.0 26.0	Lumber. 2,040 2,676 1,797
	Tocopilla, Chile.			Nitrates. 7,500 6,220 4,432

3 Barge.

2 Tug.

1 For dry-docking.

0 Tanker.

2 Barge.

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Ore S. S. Corp.	Cruz Grande, Chile	Ore S. S. Corp.	561 1 72.2 24.0	Iron ore. 5,637 6,615 4,851
DuPont de Nemours	Tocopilla, Chile	Norton, Lilly & Co.	350 8 53.9 26.0	Nitrates of soda. 22,638 15,424 4,221
Standard Transp. Co.	Noromea, N. Calif.	Standard Transp. Co.	468 3 52.2 25.0	Chrom. ore. 7,903 6,257 4,307
Sun Oil Co.	Los Angeles, Calif.	Sun Oil Co.	477 1 60.0 27.0	Gasoline. 13,518 9,630 6,476
U. S. Navy	Los Angeles, Calif.	Ford Motor Co.	250 5 45.8 20.0	Fuel oil. 10,783
Isthmian S. S. Lines	Marchfield, Ore.	Isthmian S. S. Lines	405 0 52.0 26.0	Lumber. 2,040 2,676 1,797
	Tocopilla, Chile.			Nitrates. 7,500 6,220 4,432

3 Barge.

2 Tug.

1 For dry-docking.

0 Tanker.

2 Barge.

1 Tug.

0 For dry-docking.

0 Tanker.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Origin	Destination	Company	Agent	Remarks
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Ore S. S. Corp.	Cruz Grande, Chile	Ore S. S. Corp.	561 1 72.2 24.0	Iron ore. 5,637 6,615 4,851
DuPont de Nemours	Tocopilla, Chile	Norton, Lilly & Co.	350 8 53.9 26.0	Nitrates of soda. 22,638 15,424 4,221
Standard Transp. Co.	Noromea, N. Calif.	Standard Transp. Co.	468 3 52.2 25.0	Chrom. ore. 7,903 6,257 4,307
Sun Oil Co.	Los Angeles, Calif.	Sun Oil Co.	477 1 60.0 27.0	Gasoline. 13,518 9,630 6,476
U. S. Navy	Los Angeles, Calif.	Ford Motor Co.	250 5 45.8 20.0	Fuel oil. 10,783
Isthmian S. S. Lines	Marchfield, Ore.	Isthmian S. S. Lines	405 0 52.0 26.0	Lumber. 2,040 2,676 1,797
	Tocopilla, Chile.			Nitrates. 7,500 6,220 4,432

3 Barge.

2 Tug.

Cities Service	2	15	55	3	6	17	3	14	05	3	14	05	American.	Riesfield Oil Co.	431	0	59	2	27	0	Baltimore, Md.	Gasoline.	9	655	8	093	5	347
Oklahoma *	2	17	00	3	6	55	3	16	30	3	16	30	Italian.	Societa Unione Genova.	450	0	25	0	28	2	London, England.	Wheat, lumber.	9	029	8	182	6	097
Texas.	2	20	50	3	8	01	3	16	00	3	16	00	American.	New York via wayports.	471	0	57	2	30	0	Boston, Mass.	Lumber, general.	9	622	9	154	6	966
California *	3	1	25	3	8	47	3	18	35	3	17	05	American.	Tulsa, Texas.	499	9	68	1	29	0	Pt. Arthur, Tex.	Gas oil.	15	800	10	553	8	271
San Zefirino *	3	6	40	3	9	01	3	16	35	3	17	05	British.	Anglo-Mexico Oil Co.	420	1	54	6	16	0	Curacao, D. W. I.	Lumber, general.	6	636	6	408	4	408
John P.	3	10	05	3	11	03	3	21	05	3	19	05	American.	Dunon S. S. Corp.	410	5	54	0	26	0	Baltimore, Md.	Lumber, general.	6	926	6	624	4	883
Pedersen *	3	15	50	3	16	53	4	11	05	4	13	00	Norwegian.	Anglo-Saxon Pet. Co.	420	1	58	5	25	0	London, Eng. *	Kerosene.	8	590	6	669	4	317
McCree.	3	15	00	3	17	21	4	14	05	4	14	05	American.	Bethlehem Steel Corp.	550	3	72	2	34	3	Baltimore, Md.	Iron ore.	21	515	15	551	4	297

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.												* DEPARTURES.											
* ARRIVALS.						* DEPARTURES.						* DEPARTURES.											
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	To—	Date.	Vessel.	Line.	To—												
December 28.	LaFayette.	French Line.	New York via wayports.	December 28.	Bolivar.	Colombian S. S. Line.	New York via wayports.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
December 28.	Calamates.	United Fruit Co.	Port Limon, Costa Rica.	December 28.	Republic.	U. S. S. Co.	Havana, Cuba.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
December 28.	Statenland.	Holland-America Line.	New York via wayports.	December 28.	Colombia.	Royal Netherlands S. S. Co.	Amsterdam and wayports.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
December 29.	Tolosa.	United Fruit Co.	New York via Habana.	December 28.	Orinoco.	Hague American Line.	Hague and wayports.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
December 29.	Darien C-35 *.	Seadta Airplane Co.	Barranquilla and waypts.	December 28.	Atlanta.	United Fruit Co.	New York via Habana.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
December 29.	No. 9670 *.	Pan American Airways.	San Salvador and waypts.	December 28.	Atlanta.	Standard Fruit & S. S. Co.	New Orleans and waypts.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
December 30.	Commodore Rollins.	United Fruit Co.	New Orleans, La.	December 28.	Statenland.	Holland-America Line.	New York via Habana.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
December 31.	No. 945-M *.	Pan American-Grace Airways.	Talara via wayports.	December 28.	LaFayette.	French Line.	New York via Habana.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
December 31.	Ancon.	Pan American-Grace Airways.	Avonmouth via wayports.	December 28.	LaFayette.	French Line.	New York via Habana.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
December 31.	Agua de Dios.	Panama P. S. S. Line.	New York via Kingstons.	December 28.	No. 945-M *.	Pan American-Grace Airways.	Buenaventura, Colombia.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
December 31.	Santa Maria.	United Fruit Co.	New York via Kingstons.	December 28.	Commodore Rollins.	United Fruit Co.	Port Limon, Costa Rica.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
December 31.	No. 9685 *.	United Fruit Co.	New Orleans, La.	December 31.	Tolosa.	Elders & Fyffes Line.	Avonmouth via waypts.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
December 31.	No. 670-M *.	Pan American Airways.	Miami via wayports.	December 31.	Cayana.	Cayana.	La Guayra via waypts.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
December 31.	Agua de Dios.	Pan American Airways.	San Salvador via waypts.	December 31.	No. 309-N *.	Pan American Airways.	New York via waypts.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
December 31.	Agua de Dios.	Pan American Airways.	New Orleans, La.	December 31.	Santa Maria.	United Fruit Co.	Port Limon, Costa Rica.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
January 1.	Agua de Dios.	Aluminum Line.	Aluminum Line.	January 1.	Santa Maria.	United Fruit Co.	Port Limon, Costa Rica.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
January 1.	Agua de Dios.	H. W. Post.	Cartagena, Colombia.	January 1.	Tela.	Seadta Airplane Co.	Barranquilla via waypts.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
January 2.	Gefeli.	Standard Fruit & S. S. Co.	Puerto Colombia.	January 1.	Tela.	Darien C-35 *.	Barranquilla via waypts.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
January 2.	Gefeli.	Standard Fruit & S. S. Co.	Puerto Colombia.	January 2.	No. 9685 *.	Pan American Airways.	San Salvador and waypts.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
January 3.	Tela.	United Fruit Co.	Bosua, Rep. of Panama.	January 2.	No. 9685 *.	Pan American Airways.	San Salvador and waypts.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
January 3.	No. 309-N *.	Pan American Airways.	Bosua, Rep. of Panama.	January 3.	Tela.	Seadta Airplane Co.	Barranquilla via waypts.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
January 3.	No. 945-M *.	Pan American-Grace Airways.	Talara via wayports.	January 3.	Dora K. *.	A. L. Surgeon.	Colon, Rep. of Panama.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
January 3.	No. 668-M *.	Pan American Airways.	Miami via wayports.	January 3.	Imppo *.	Colon Import & Export Co.	Colon, Rep. of Panama.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												
January 3.	No. 9670 *.	Pan American Airways.	San Salvador and waypts.	January 3.	Imppo *.	Colon Import & Export Co.	Colon, Rep. of Panama.	December 28.	Princeton.	Colombian S. S. Line.	New York via wayports.												

* Air mail carrier. *6 Schooner. *7 Motor sloop. *8 Motor ship. *9 Motor schooner.

PORT OF BALBOA.											
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	To—				
December 29.	Supreme *.	Van Camp Seafood Co.	Los Angeles, Calif.	December 31.	Real *.	Hans Elliot.	Panama Bay, R. P.				
December 30.	Real *.	Hans Elliot.	Panama Bay, R. P.								

* Other than ships passing through the Canal.

Canal Traffic in December, 1930.

During the month of December, 1930, 495 commercial vessels and 9 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,192,583.85, and on the launches \$41.85, or a total tolls collection of \$2,192,625.70.

The daily average number of transits of commercial vessels was 15.97, and the daily average tolls collection \$70,728.51. The average amount of tolls paid by each of the commercial transits was \$4,429.46 as compared with \$4,380.70 for the month of November, 1930, and \$4,423.43 in comparison with December, 1929.

Tanker Traffic Through the Panama Canal in December, 1930.

During the month of December, 1930, 77 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 431,906, on which tolls of \$379,290.62 were paid. Cargo amounted to 418,138 tons, which included 411,438 tons of mineral oils and 6,700 tons of coconut oil.

In point of net tonnage, tanker traffic decreased 20.2 per cent as compared with the tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 18.9 per cent.

Tank vessels comprised 15.6 per cent of the total commercial transits through the Canal during the month; made up 17.5 per cent of the total Panama Canal net tonnage; were the source of 17.3 per cent of the tolls collected; and carried 19.3 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of December, 1930, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for December, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	10	53,007	\$41,235.31	12,860
Danish.....	1	6,054	4,358.88	.....
Norwegian.....	4	20,480	14,745.60	.....
United States.....	24	136,195	99,286.78	2,500
Total, December, 1930.....	39	215,736	159,626.57	15,360
Total, November, 1930.....	40	218,894	164,388.02	18,354
Total, October, 1930.....	44	252,093	187,263.13	25,495
Total, December, 1929.....	50	263,852	194,228.44	22,227
<i>Pacific to Atlantic.</i>				
British.....	7	40,090	43,562.50	78,328
Danzig.....	1	6,127	6,585.00	11,236
German.....	1	4,435	4,773.75	8,327
Norwegian.....	4	21,259	22,715.00	41,203
United States.....	25	144,259	142,027.80	263,684
Total, December, 1930.....	38	216,170	219,664.05	402,778
Total, November, 1930.....	43	238,501	238,306.60	423,487
Total, October, 1930.....	49	278,943	279,266.88	467,651
Total, December, 1929.....	50	277,367	277,672.15	493,431

*Includes 6,700 tons of coconut oil.

The following tabulation shows the tanker traffic through the Canal during December, 1930, classified according to trade routes:

ATLANTIC TO PACIFIC.

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	23	127,576	\$93,081.10	2,500
United States to South America.....	4	26,032	18,743.04	
Mexico to South America.....	1	4,408	5,048.75	8,349
West Indies to South America.....	1	3,326	3,590.00	4,511
Europe to United States.....	10	54,394	39,163.68	

PACIFIC TO ATLANTIC.

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	24	140,540	\$137,565.00	256,984
United States to Europe.....	6	30,139	32,113.75	55,699
South America to United States.....	3	17,537	19,132.50	34,919
South America to Canada.....	3	18,108	19,805.00	37,240
South America to Europe.....	1	6,127	6,585.00	11,236
Philippine Islands to United States.....	1	3,719	4,462.80	6,700

*Coconut oil.

Of the traffic passing through the Canal in December, 1930, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for December, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
December, 1930.....	27	151,619	\$109,165.68	
November, 1930.....	33	181,068	133,889.22	12,576
October, 1930.....	33	192,300	138,456.00	
December, 1929.....	41	225,048	163,604.04	8,574
<i>From Los Angeles.</i>				
December, 1930.....	28	159,849	158,238.75	292,960
November, 1930.....	35	196,698	195,454.10	345,034
October, 1930.....	34	198,336	193,930.29	328,365
December, 1929.....	39	218,565	217,711.25	388,571

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 2, 1931.

No. 822.

Panama Canal, Gatun Lake, spar buoy changed to gas buoy. Spar buoy No. 14, located in Gatun Lake between spar buoy No. 12 and gas buoy No. 16, was changed to gas buoy No. 14, effective December 30, 1930.

J. L. SCHLEY,
Acting Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 5, 1931.

No. 825.

Panama Canal, Miraflores Lake, spar buoys changed to gas buoys. Spar buoys Nos. 3, 4, 5, and 6, located in Miraflores Lake have been permanently discontinued and gas buoys Nos. 3, 4, 5, and 6 have been established. Buoys Nos. 3 and 5 show fixed white lights, and Nos. 4 and 6 show fixed red lights.

Gas buoys marking center positions between buoys Nos. 3, 4, 5, and 6 have been permanently discontinued.

J. L. SCHLEY,
Acting Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 5, 1931.

No. 826.

Colombia, Puerto Colombia, gas buoy reported burning. The master of the American S. S. *Baracoa* reports that on the night of December 30, 1930, the red gas buoy about 100 yards, 160° from the wreck in Puerto Colombia harbor was burning.

Light No. 2333, H. O. List of Lights, Vol. 1, 1930. (Reported extinguished in Notice to Mariners No. 685, Balboa Heights, dated April 3, 1930.)

J. L. SCHLEY,
Acting Governor.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 7, 1931.

No. 828.

Panama, West Coast, Morro Puercos Light, characteristic changed. Effective January 5, 1931, the characteristic of Morro Puercos Light was changed from a regular flash of 0.5 second, eclipse 4.5 seconds to a dual installation of two separate lights, flashing white, each with a period of 5.0 seconds; flash 0.5 second, eclipse 4.5 seconds. The lights may flash either simultaneously or successively, hence the period between flashes will likely be irregular.

Approximate position on charts: Latitude 7° 13' 55" N., longitude 80° 26' 15" W.

J. L. SCHLEY,
Acting Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 7, 1931.

No. 829.

Colombia, West Coast, Buenaventura River, information concerning wreck. The following is quoted from Notice to Mariners No. 52, Washington, D. C., dated December 27, 1930:

The master of the American motor ship *City of San Francisco* reports that the wreck of the S. S. *Tritonia*, sunk in Buenaventura Harbor, has been blown up with dynamite and that the area westward of the charted position of the wreck is foul with submerged wreckage. The wreck is marked at night by an oil lantern.

Approximate position: Latitude 3° 52' 30" N., longitude 77° 06' 00" W.

J. L. SCHLEY,
Acting Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending January 3, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Atlantida	Standard Fruit & S. S. Co.		December 28.		364
Baralt	Royal Netherlands S. S. Co.		December 28.		37½
Nosa Chief	N. O. & S. A. S. S. Co.		December 28.		300
Cerigo	Hamburg-American Line		December 28.		169
Colombia	Royal Netherlands S. S. Co.		December 28.		291
Cjd.	Pacific Steam Navigation Co.		December 28.		16
Ludwigshafen	North German Lloyd		December 28.		150
Orinoco	Hamburg-American Line		December 28.		546
Dinteldijk	Holland-America Line	December 28.	December 28.	19	118
Nitokris	Hamburg-American Line	December 28.	December 28.	32	87
Calamares	United Fruit Co.	December 28.	December 28.	9	733½
Guatemala	Panama Mail S. S. Co.	December 29.	December 30.	201	575
West Ira	McCormick S. S. Line	December 29.	December 30.	60	(²)
Pacific Enterprise	Furness, Withy & Co.	December 29.	December 30.	(¹)	316
Tolosa	United Fruit Co.	December 29.	December 31.	309	26
Canadian Constructor	Can. Nat. Steamships	December 30.	December 30.	50	(²)
Este	North German Lloyd	December 30.	December 30.	18	114
Commodore Rollins	United Fruit Co.	December 30.	December 31.	1,109	(²)
Tokai Maru	Osaka Shosen Kaisha	December 31.	December 31.	116	30
Cavina	Elders & Fyffes, Ltd.	December 31.	December 31.	3	(²)
San Bernardino	States S. S. Line	December 31.	December 31.	232	(²)
Orta	Pacific Steam Navigation Co.	December 31.	January 1.	71	174
Tela	United Fruit Co.	December 31.	January 1.	1,346	60
Sorvanger	Aluminium Line	December 31.	January 1.	929	(²)
Santa Marta	United Fruit Co.	December 31.	January 1.	371	223
Aneon	Panama R. R. S. S. Line	December 31.	December 31.	4,177	
Eemdijk	Holland-America Line	January 1.	January 1.	(¹)	168
Colombia	Panama Mail S. S. Co.	January 1.	January 2.	1,099	143
Carl Legien	Hamburg-American Line	January 1.	January 2.	398	51
Creole Bueno	Venezuela-Gulf Oil Co.	January 1.	January 2.	3,037	(²)
Cali	North German Lloyd	January 1.	January 3.	929	386
Cefalu	Standard Fruit & S. S. Co.	January 2.	January 2.	198	
Cauca	National Navigation Co.		January 2.		124
Kellerwald	Hamburg-American Line	January 2.	January 2.	8	(²)
Zenon	French Line	January 2.	January 3.	158	(²)
Buenaventura	Panama R. R. S. S. Line	January 2.	January 3.	620	(²)
Baracoa	Colombian S. S. Line	January 2.	January 3.	241	86
Santa Rita	Grace Line	January 2.	January 3.	219	516
Acajutla	Pacific Steam Navigation Co.		January 3.		339
Dora K.	R. Feuillebois	January 3.	January 3.	(¹)	19
Tela	United Fruit Co.	January 3.	January 3.	97	160
Agira	North German Lloyd	January 3.	January 3.	81	

¹No cargo discharged.

²No cargo laded.

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., January 14, 1931. No. 24.

Comparison of Canal Traffic in December, 1930, with December Traffic in Previous Years.

Commercial traffic through the Canal during the month of December, 1930, was the lowest December traffic since 1926, when 458 vessels were passed through the waterway. In comparison with December, 1929, the traffic during the past month declined 27 transits (5.2 per cent), 75,145 net tons, Panama Canal measurement (2.9 per cent), and 358,050 cargo tons (14.2 per cent).

In the tabulation below are shown the number of transits, net tonnage, Panama Canal measurement, and the tons of cargo carried through the Canal during the month of December each year from 1914 to 1930, inclusive, and for comparison, the monthly averages for the corresponding fiscal year ending on June 30th following:

Calendar year.	Month of December.			Fiscal year.	Average per month for fiscal year.		
	Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.		Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.
1914.....	98	341,993	452,779	1915.....	102	361,197	465,567
1915.....	7	8,594	12,218	1916.....	63	199,687	257,843
1916.....	151	467,923	539,847	1917.....	150	483,213	588,213
1917.....	152	482,816	563,192	1918.....	172	547,839	627,669
1918.....	168	533,992	629,961	1919.....	169	510,416	576,385
1919.....	260	927,726	924,479	1920.....	206	712,170	781,208
1920.....	265	1,027,918	1,076,539	1921.....	241	951,323	966,601
1921.....	239	1,017,244	953,053	1922.....	228	951,455	907,075
1922.....	304	1,375,263	1,335,102	1923.....	331	1,350,482	1,630,500
1923.....	306	2,516,491	2,464,634	1924.....	436	2,179,073	2,249,559
1924.....	407	1,939,196	2,265,687	1925.....	389	1,904,596	1,996,570
1925.....	462	2,257,409	2,358,170	1926.....	433	2,064,549	2,169,787
1926.....	458	2,135,002	2,310,270	1927.....	456	2,185,651	2,312,351
1927.....	589	2,616,728	2,573,828	1928.....	538	2,464,886	2,469,226
1928.....	579	2,698,140	2,714,987	1929.....	534	2,468,483	2,555,250
1929.....	522	2,548,771	2,524,934	1930.....	515	2,498,385	2,502,519
1930.....	495	2,473,626	2,166,884	.....	490	2,438,406	2,320,662

¹ Canal opened August 15, 1914.

² Average for 10½ months.

³ Average for calendar year, 1930.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 9, 1931.

No. 830.

Ecuador, La Plata Island light, reexhibited. The Ecuadorian Minister to Panama is the authority for the following information:

La Plata Island light has been reexhibited with the following characteristics: Group flashing white; flash 0.7 second, eclipse 3.0 seconds, flash 0.7 second, eclipse 3.0 seconds, flash 0.7 second, eclipse 17.0 seconds.

Position: Latitude 1° 15' 50" S., longitude 81° 06' 00" W.

H. BURGESS,
Governor.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, January 10, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Willaro.....	4	3.40	4	6.25	4	13.32	4	15.00	American..	Williams S. S. Line.	386.8	52.2	16.0	Baltimore, Md.	Tacoma, Wash. . . .	General.	2,263	5,984	4,070
Agra.....	3	18.15	5	6.00	5	14.54	5	15.50	German..	North German Lloyd.	295.0	46.0	18.0	Hamburg, Germany	Champerco, Guat.	General.	2,300	3,041	1,967
Nordho.....	4	23.55	5	6.15	5	13.38	5	18.10	Danish..	Inter. Freightling Co.	385.0	53.5	14.0	Baltimore, Md.	Antofagasta, Chile	General.	2,152	6,190	4,569
Trelawny.....	5	00.50	5	6.25	5	13.34	5	14.35	Norwegian.	Foster, Hain & Reid.	406.0	54.5	15.0	Baltimore, Md.	Portland, Oreg.	Ballast.	1,377	6,395	4,512
Belray.....	5	3.25	5	7.15	5	15.04	5	19.20	Norwegian.	Christen Smith.	319.2	46.4	16.0	Philadelphia, Pa.	Valparaiso, Chile.	General.	1,377	3,085	2,025
S-13.....	5	8.25	5	8.25	5	15.39	5	15.39	American.	U. S. Navy.	231.0	21.0	.....	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	.....	.....	.....
S-10.....	5	8.30	5	15.53	5	15.53	5	15.53	American.	U. S. Navy.	231.0	21.0	.....	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	.....	.....	.....
S-12.....	5	1.05	5	9.45	5	15.43	5	18.10	Panamanian.	Klavness Line.	426.0	58.5	21.0	Antwerp, Belgium.	Portland, Oreg.	Sand, steel, gen.	4,837	8,388	6,065
Ruapehu.....	5	21.05	6	6.15	6	14.55	6	16.20	British..	N. Z. Shipping Co.	527.0	58.0	26.6	London, England.	Auckland, N. Z.	General.	4,760	9,079	6,798
Cumberland.....	5	19.35	6	7.10	6	15.55	6	17.05	British..	Federal Steam Nav. Co.	520.0	64.2	27.6	Newport, England.	Bluff, N. Z.	General.	7,614	12,930	9,300
Robin Hood.....	5	21.50	6	7.40	6	16.40	6	18.05	American.	Isthmian S. S. Lines.	424.8	55.0	24.0	Baltimore, Md.	Tacoma, Wash.	General.	6,280	7,473	5,833
Point Arena.....	6	7.10	6	8.35	6	16.48	6	18.05	American.	Swayne & Hoyt.	324.0	46.2	20.7	Corpus Christi, Tex.	Seattle, Wash.	General.	2,999	3,984	2,612
Ashville.....	2-16	20.40	6	9.00	6	16.48	6	18.05	American.	U. S. Navy.	225.0	41.0	.....	Cristobal, C. Z.	Gatun Lake, C. Z.	Ballast.	.....	.....	.....
Prince Rupert City.....	6	1.20	6	9.05	6	17.30	6	19.05	British..	Am. Derutra Transport	400.5	54.3	20.6	New York, N. Y.	Vladivok, U.S.S.R.	General.	4,195	6,977	5,383
Victoria City.....	6	3.55	6	10.15	6	18.38	6	19.55	British..	Sir. W. R. Smith & Sons	400.5	54.3	22.8	New York, N. Y.	Shanghai, China.	General.	6,492	6,964	5,389
Trontolite.....	6	5.05	6	12.00	6	19.40	6	20.40	British..	Aktakskabet Vallo Operafrini.	420.0	57.0	22.2	New York, N. Y.	Talara, Peru.	Ballast.	.....	7,226	4,413
Montanan.....	6	10.05	6	13.15	6	21.03	6	22.05	American.	Amer-Hawaiian Line.	404.0	53.9	16.10	Boston, Mass.	Seattle, Wash.	General.	1,838	6,756	4,775
Dorothy.....	6	13.40	6	15.05	6	22.15	6	23.15	American.	Lukenbach Line.	448.9	60.2	20.10	Boston, Mass.	Seattle, Wash.	General.	3,400	9,294	6,861
Canadian.....	6	15.10	6	15.20	6	22.25	6	23.25	American.	Can. Nat. Steamships.	400.0	52.0	17.0	Halifax, N. S.	Auckland, N. Z.	General.	2,930	6,228	4,491
Transporter.....	6	7.40	6	7.00	6	14.34	6	15.45	Dutch..	Royal Neth. S. S. Co.	400.0	58.3	23.6	Hamburg, Germany	Corral, Chile.	General.	4,169	7,817	6,097
Beekoop.....	6	16.15	6	7.10	6	13.17	6	14.30	American.	Roosevelt S. S. Co., S. B.	395.0	55.0	25.0	New York, N. Y.	Haiphong, China.	General.	5,849	7,209	5,172
Whicita.....	7	3.50	7	7.15	7	14.51	7	15.48	American.	Dimon S. S. Corp.	399.0	54.7	19.0	New York, N. Y.	Seattle, Wash.	General.	3,500	6,133	4,354
Pacific Cedar.....	7	3.50	7	7.15	7	14.51	7	15.48	American.	U. S. Navy.	483.6	69.0	20.0	Guantanamo, Cuba	Los Angeles, Calif.	Target material.	8	.....	.....
Salmas.....	7	7.10	7	7.20	7	15.46	7	17.35	American.	Standard Oil Co.	430.5	69.0	20.0	Chester, Pa.	Los Angeles, Calif.	Ballast.	.....	.....	.....
Comet.....	7	4.25	7	8.55	7	16.36	7	17.35	American.	Arrow Line.	439.5	58.0	25.7	Beaumont, Texas.	Los Angeles, Calif.	Batching oil.	8,306	8,913	6,210
Astral.....	7	8.15	7	9.05	7	17.12	7	18.05	American.	Standard Transp. Co.	439.5	58.0	25.7	Beaumont, Texas.	Los Angeles, Calif.	Batching oil.	1,936	6,579	4,810
Dorothy Cahill.....	7	10.25	7	10.35	7	17.35	7	18.50	American.	Arrow Line.	410.0	54.2	17.4	Baltimore, Md.	San Francisco, Cal.	General.	7,788	7,611	5,454
Steel Sealar.....	7	12.18	7	12.25	7	19.45	8	00.58	American.	Panama Mail S. S. Co.	425.0	56.0	25.7	Philadelphia, Pa.	San Francisco, Cal.	General.	.....	.....	.....
Hello.....	7	7.05	7	14.35	7	22.43	8	00.10	Norwegian.	Isthmian S. S. Lines.	214.0	34.0	11.3	Norfolk, Va.	Champerco, Guat	Ballast.	1,158	722	.....
San Eduardo.....	7	10.40	7	14.50	7	22.30	8	3.00	British..	Anglo-Mexican Oil Co.	420.3	54.0	21.0	Antwerp, Belgium.	Corral, Chile.	Ballast.	6,390	4,382	.....
Iowa.....	7	14.40	7	15.15	7	8.00	8	10.01	French..	French Line.	449.0	53.0	19.0	London, England.	Corral, Chile.	Iron, cement.	1,489	7,469	5,020
Cedar Branch.....	7	13.40	7	23.05	8	9.55	8	13.00	British..	F. & W. Ritson.	300.5	51.0	19.0	Tyne, England.	Valparaiso, Chile.	General.	1,812	4,927	3,597
Wentworth.....	7	23.10	8	4.20	8	11.31	8	12.45	British..	R. S. Dagfish, Ltd.	400.0	52.3	14.0	Havana, Cuba.	Vancouver, B. C.	Ballast.	.....	5,213	4,058
Tai Yang.....	8	3.35	8	6.25	8	13.18	8	14.25	Norwegian.	Barber Wilhelmsen Line	491.4	60.4	25.0	Philadelphia, Pa.	Chempulpo, China.	General.	5,876	10,009	7,075

* Motor ship. * Submarine. * Gunboat.

Bronxville	8	3.55	8	14.55	Norwegian.	Strange & Co.	386.3	54.2	14.10	New York, N. Y.	Puget Sound Wash.	Ballast.	6.715
Snead	8	7.15	8	16.15	Norwegian.	Fern Line.	377.6	54.0	18.6	Galveston, Tex.	Yokohama, Japan.	Slag.	4,060
Hermius	8	10.50	8	22.18	British.	Shaw, Savill & Albion.	477.6	63.1	29.7	Antwerp, Belgium.	Auckland, N. Z.	General.	5,896
Pensylvania	8	5.25	8	13.40	French.	French Line.	400.0	52.0	19.3	Havre, France.	Talcahuano, Chile.	General.	1,344
Santa Clara	8	9.00	8	22.39	French.	Grace Line.	433.3	63.4	25.6	New York, N. Y.	Talcahuano, Chile.	General.	2,757
Lena	8	15.20	8	34.04	American.		430.3	63.4	25.6	New York, N. Y.	Talcahuano, Chile.	General.	11,680
Lukenbach	8	14.35	9	1.05	American.	Lukenbach Line.	425.0	53.7	26.6	Houston, Texas.	Seattle, Wash.	General pipe.	6,063
India	8	17.30	9	11.24	Danish.	East Asiatic Co.	470.0	63.0	17.0	Ponce, P.R., Rica.	San Francisco, Cal.	Ballast.	7,217
Caldas	5	21.04	9	12.35	Colombian.	National Navigation Co.	116.0	21.1	10.6	Cristobal, C. Z.	Buenaventura, Col.	General.	11,159
Flomar	9	1.10	9	3.55	American.	C. I. M. S. S. Corp.	410.0	54.2	20.8	Baltimore, Md.	Seattle, Wash.	General.	210
San Mateo	6	18.55	9	5.45	American.	United Fruit Co.	315.0	44.0	17.10	Cristobal, C. Z.	San Francisco, Cal.	General steel.	5,717
President	9	5.25	9	6.30	American.	Dollar Line.	516.5	72.2	25.6	New York, N. Y.	San Francisco, Cal.	General.	3,496
Wilson	9	3.30	9	6.55	American.	Richfield Oil Co.	322.0	51.0	18.0	Baltimore, Md.	San Francisco, Cal.	General.	2,372
Kokoske	9	6.20	9	17.53	American.	Panama-Pacific Line.	574.4	80.3	25.6	New York, N. Y.	Los Angeles, Calif.	Ballast.	15,286
California	9	3.30	9	16.07	American.	Panama-Pacific Line.	574.4	80.3	25.6	New York, N. Y.	Los Angeles, Calif.	Ballast.	5,550
Scotia	9	9.00	9	17.15	American.	U. S. Navy.	149.3	30.0		Cristobal, C. Z.	San Francisco, Cal.	General.	2,002
Gen.-G. W.	9	9.00	9	17.15	American.	U. S. Navy.	149.3	30.0		Cristobal, C. Z.	San Francisco, Cal.	General.	2,002
Geety	9	9.00	9	17.15	American.	U. S. Army.	89.0	22.0		Cristobal, C. Z.	Balboa, C. Z.	Coal.	3,271
Apurimac	8	15.40	9	11.00	Peruvian.	Cia. Peruana de Vap.	332.0	43.0	21.0	Norfolk, Va.	Callao, Peru	General.	4,867
Silverwainut	9	14.00	9	13.40	British.	Kerr S. S. Co.	435.0	62.0	22.0	New York, N. Y.	Mamila, P. I.	General.	5,360
Arizona	9	3.40	10	2.35	French.	French Line.	425.0	55.0	23.5	Havre, France.	Vancouver, B. C.	General steel.	2,074
Herman F.	9	17.05	10	5.50	American.	Texas-Gulf Sulphur Co.	409.8	54.2	23.0	Galveston, Tex.	Dupont, Wash.	Sulphur.	5,688
Champetico	4	16.40	10	7.10	British.	Padre Steam Nav. Co.	293.7	41.0	17.7	Cristobal, C. Z.	Champetico, Guat.	General.	463
Mandules	7	21.30	10	7.15	German.	Roland Line.	216.5	32.9	12.8	Cristobal, C. Z.	Guayaquil, Ecuador	General.	1,587
Canada	9	22.30	10	7.45	British.	Can. Nat. Steamships.	400.0	52.4	17.9	Halifax, N. S.	Brisbane, Australia	General.	957
London	10	6.05	10	8.45	British.	Federal Steam Nav. Co.	524.0	65.0	26.0	London, England.	Auckland, N. Z.	General.	6,930
Cambridge	9	23.40	10	10.00	Italian.	Nax Libera-Triestina.	430.0	53.0	18.0	Trieste, Italy.	Vancouver, B. C.	General.	5,963
Rialto	10	12.10	10	14.25	American.	Atlantic Refining Co.	425.0	57.2	19.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast.	1,279
S. C. T. Dodd	10	12.10	10	14.25	American.	Atlantic Refining Co.	425.0	57.2	19.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast.	7,481
Gen. Wm. M.	10	6.45	10	11.45	American.	U. S. Army.	156.0	32.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.	1,132
Yngman	10	6.45	10	11.45	American.	U. S. Army.	156.0	32.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.	1,132

* Tanker. * Mine planter. * Cotton and lubricating oil.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Margaret	3	19.00	4	6.14	4	13.30	5	15.05	Sve-fish.	Johnson Line.	405.0	54.0	25.0	Honolulu, T. H.	Stockholm, Sweden	General.	5,885
Johnson	4	4.25	4	6.50	4	15.10	5	4.10	British.	Shaw, Savill & Albion.	518.9	62.2	27.0	Auckland, N. Z.	London, England.	Frozen, general.	5,200
Tamara	4	8.30	4	9.45	4	16.40	4	16.40	German.	Pacific Steam Nav. Co.	290.1	41.7	17.5	Champetico, Guat.	Cristobal, C. Z.	General.	2,992
Champetico	4	9.30	4	10.20	4	17.55	4	20.05	British.	Hamburg-American Line	435.5	53.2	27.0	Valparaiso, Chile.	Hamburg, Germany	General.	7,583
Rhodops	4	9.20	4	11.00	4	18.30	4	18.30	British.	Blue Star Line.	499.8	64.0	28.0	N. Westm er B. C.	Newcastle, Eng.	General.	7,243
Donic Star	4	10.50	4	12.30	4	19.35	5	13.05	American.	Kerr & Co.	373.0	52.6	14.0	Los Angeles, Calif.	Galveston, Tex.	Ballast.	6,085
Silver	5	10.50	5	12.30	5	19.35	5	13.05	Japanese.	The Texas Co.	416.8	56.1	25.0	Los Angeles, Calif.	Providence, R. I.	Gasoline.	8,468
Texas	5	9.30	5	11.15	5	18.35	5	17.35	British.	Philippine Cen.-Sugar.	355.0	51.0	26.0	Pulupuluan, P. I.	Atlantic City, U. S.	Sugar.	7,100
Thianan	5	9.50	5	10.40	5	17.50	5	17.50	British.	Souther & Co.	400.0	53.0	26.0	Phuamnam, B. C.	Atlantic City, U. S.	Lumber, ore	6,963
Helen	5	12.45	5	13.35	5	18.40	5	18.40	American.	Weyerhaeuser-Thm. Co.	440.0	56.0	29.0	Everett, Wash.	Baltimore, Md.	Lumber.	9,720
Clayton	5	12.45	5	13.38	5	18.40	5	18.40	American.	United Fruit Co.	446.0	21.1	9.0	Buenaventura, Col.	Cristobal, C. Z.	Coffee.	156
Santa Maria	5	12.35	5	15.15	5	21.50	6	11.30	American.	Grace Line.	465.0	64.0	23.0	Talcahuano, Chile.	New York, N. Y.	General.	4,619

* Tanker. * Motor ship.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Los Angeles **	5	11 45	5	15 25	5	23 45	6	9 50	German	North German Lloyd.	432.2	59.1	25.0	Vancouver, B. C.	Hamburg, Germany	General	7,547	8,451	6,344
Virginia	5	11 40	6	17 30	6	14 30	6	15 20	American	Panama-Pacific Line.	586.4	80.3	29.0	San Francisco, Cal.	New York, N. Y.	General	7,700	8,234	6,170
Lobos	6	4 15	6	6 25	6	17 35	6	17 35	American	United Fruit Co.	549.6	72.2	34.0	Guantanamo, Cuba	Baltimore, Md.	Iron ore	21,500	14,735	6,633
San Mateo.	5	11 00	6	7 28	6	15 55	6	15 55	American	The Texas Co.	315.2	44.2	19.4	San Francisco, Cal.	Chicago, Ill.	Gas oil	10,000	3,466	5,181
Oregon *	5	20 50	6	8 05	6	20 45	6	20 45	American	Royal Mail S. P. Co.	425.8	57.0	28.0	Los Angeles, Calif.	Pt. Arthur, Tex.	Gas oil	10,000	7,218	5,184
Nebaska.	6	4 20	6	8 21	6	20 25	7	2 25	British	Vancouver B. C.	450.0	58.0	24.0	Vancouver, B. C.	London, England	Nitrate of soda.	5,100	5,578	4,588
Queen Eleanor.	6	6 20	6	8 48	6	21 15	6	22 00	British	DuPont de Nemours.	400.3	52.3	25.0	Vancouver, B. C.	Jacksonville, Fla.	Nitrate of soda.	7,580	5,808	4,054
Luckenbach.	6	9 35	6	10 23	6	22 00	6	22 00	American	Lockenbach Line.	446.0	56.1	28.0	Los Angeles, Calif.	Rosston, Mass.	General	7,163	8,508	6,179
Hawaiian.	6	9 55	6	10 53	6	22 55	6	22 55	American	Amer-Hawaiian Line.	404.6	53.9	25.0	Portland, Ore.	Portland, Ore.	General	6,546	6,786	4,767
Adalia.	6	13 00	6	13 45	6	23 58	7	5 00	German	Kerr, Gifford & Co.	337.5	48.1	20.0	Vancouver, B. C.	London, England	Wheat	9,780	4,284	3,054
Illinois *	6	11 49	7	6 06	7	14 05	7	14 05	Japanese	The Texas Co.	416.8	56.1	25.0	Vancouver, B. C.	Pt. Arthur, Tex.	Gasoline	7,611	5,914	5,052
Karachi Maru.	6	23 10	7	6 44	7	16 15	7	19 35	Japanese	Sugar Central Co.	335.0	51.0	24.2	Honolulu, I.	New York, N. Y.	Sugar	7,000	5,914	4,388
Munidos	7	03 30	7	7 24	7	19 15	7	19 15	American	Mission, McCork'k Line.	370.0	53.1	26.0	Seattle, Wash.	New York, N. Y.	Lumber, general	6,000	5,575	4,187
San Siroon.	7	2 34	7	8 33	7	21 15	7	21 15	American	Quaker Line.	410.5	54.3	24.4	Portland, Ore.	Philadelphia, Pa.	Lumber, general	6,048	6,573	4,910
Nesa Prince.	7	7 40	7	8 33	7	19 30	7	21 30	German	N. O. & A. S. S. Co.	324.0	46.2	22.0	Talcahuano, Chile	New Orleans, La.	Nitrate of soda.	4,040	3,983	2,570
Manizales	7	7 50	7	8 55	7	21 30	7	21 30	German	Roland Line.	216.5	32.9	11.0	Guayaquil, Ecuador	Cristobal, C. Z.	General	327	1,132	741
Hokuroku	7	11 00	7	14 19	7	23 10	8	12 20	Japanese	Osaka Shosen Kaisha.	446.0	60.5	22.0	Hongkong, China.	New York, N. Y.	General	2,725	8,942	6,251
Maru 1 *	7	18 55	7	19 45	8	4 40	8	6 00	Japanese	Chilean Nit' & Prod. As'n	385.0	51.0	27.0	Antofagasta, Chile.	Azores **	Nitrate of soda.	7,748	5,919	4,400
Washington	8	4 45	8	6 51	8	14 45	8	14 45	American	Arrow Line.	409.5	54.2	25.0	Portland, Ore.	New York, N. Y.	Lumber	7,849	6,615	4,966
Jane	8	6 20	8	7 52	8	14 50	8	14 50	American	U. S. Army.	98.0	22.0	22.0	Balboa, C. Z.	Cristobal, C. Z.	General	3,222	13,137	9,067
Christenson.	8	6 20	8	8 39	8	20 30	8	21 30	British	Pacific Steam Nav. Co.	825.3	62.8	22.0	Talcahuano, Chile.	Liverpool, England	Towing barge	7,532	6,621	4,916
Gen. G. W.	8	6 15	8	9 58	8	21 30	8	21 30	British	U. S. Navy.	155.0	30.0	30.0	Balboa, C. Z.	Cristobal, C. Z.	General	7,532	6,621	4,916
Getty **	8	11 05	8	12 11	8	22 25	8	22 25	British	Beardon Smith Line.	401.6	54.3	26.0	Vancouver, B. C.	Cardiff, Wales	General	7,550	6,161	4,550
Oroya.	8	11 55	8	12 40	8	23 30	9	13 27	American	Strauss & Co., London.	406.5	54.1	23.0	San Francisco, Cal.	Dublin, Ireland.	Barley	7,550	6,161	4,550
Saiota **	8	10 30	8	14 47	9	00 10	9	00 10	Norwegian	Roosevelt S. S. Co.	395.5	55.0	27.0	Shanghai, China.	Baltimore, Md.	Sugar, general.	6,293	7,344	5,283
Skearns.	8	10 30	8	14 47	9	00 10	9	00 10	Norwegian	Knut Knutsen.	375.8	51.4	23.0	Corral, Chile.	Baltimore, Md.	Sugar, general.	6,283	5,456	3,797
Dalyan.	8	11 05	8	12 11	8	22 25	8	22 25	British	Panama Mail S. S. Co.	296.1	45.9	18.0	San Francisco, Cal.	Cristobal, C. Z.	Gasoline	1,201	3,848	2,606
Elwood **.	8	11 55	8	12 40	8	23 30	9	13 27	American	Anglo-Saxon Pet. Co.	451.8	59.2	26.0	Los Angeles, Calif.	Cruscaud, D. W. I.	Gasoline	9,869	8,099	5,338
Indra **.	8	10 30	8	14 47	9	00 10	9	00 10	Norwegian	The Texas Co.	416.8	56.1	27.0	Los Angeles, Calif.	Houston, Texas	Gasoline	7,250	6,925	4,982
City of San Francisco **.	8	15 27	8	19 25	9	2 10	9	15 25	American	Can. Nat. Steamships	400.0	52.4	21.0	Sydney, Australia.	Halifax, N. S.	General	4,998	5,914	4,195
Lion *.	8	12 32	9	6 00	9	15 25	9	15 25	Norwegian	Westfal, Larsen & Co.	398.1	54.7	24.0	Vancouver, B. C.	Buenos Aires, Arg.	Lumber, general.	5,344	6,858	5,308
New Jersey *.	9	5 30	9	6 39	9	16 10	9	16 10	American	Can. Nat. Steamships	400.0	52.4	21.0	Sydney, Australia.	Halifax, N. S.	General	4,998	5,914	4,195
Canadian	9	2 15	9	7 32	9	17 40	9	19 10	British	Westfal, Larsen & Co.	398.1	54.7	24.0	Vancouver, B. C.	Buenos Aires, Arg.	Lumber, general.	5,344	6,858	5,308
Commander.	9	1 00	9	8 32	9	20 00	9	21 05	Norwegian	Can. Nat. Steamships	400.0	52.4	21.0	Sydney, Australia.	Halifax, N. S.	General	4,998	5,914	4,195
Tanager **.	9	1 00	9	8 32	9	20 00	9	21 05	Norwegian	Westfal, Larsen & Co.	398.1	54.7	24.0	Vancouver, B. C.	Buenos Aires, Arg.	Lumber, general.	5,344	6,858	5,308

** Motor ship. ** Junior mine planter. ** Tug. ** For orders. ** Gasoline, explosives, and general. ** Fruit, lumber, and general. ** Coffee, gasoline, and general.

Quasbridge	9 6.00	9 8.45	9 21.20	9 22.40	British	406.1	56.1	26.0	N. Westm ^{er} , B. C.	New York, N. Y.	Lumber, shingles
Neवान	9 8.50	9 9.45	9 21.50	9 21.50	American	370.0	57.8	24.0	Seattle, Wash.	Boston, Mass.	General
Zifella	9 10.15	9 11.15	9 22.50	9 22.50	British	480.9	51.4	26.0	Tocopilla, Chile	Azores ^{1,2}	Nitrates
Durazzo	9 11.25	9 12.22	9 23.50	9 23.50	American	227.5	31.4	13.0	Guayaquil, Ecuador	Cristobal, C. Z.	(*)
Flow City	9 12.50	9 13.00	9 23.40	9 23.45	German	334.0	46.2	22.0	San Francisco, Cal.	N. London, Conn.	Lumber-general
Angur	9 13.50	9 14.30	9 23.10	9 23.10	American	393.1	54.3	26.0	Sua, Fiji Islands	Bremen, Germany	General
Amesnoor	9 14.50	9 15.30	9 23.10	9 23.10	British	375.0	52.6	25.0	Sua, Fiji Islands	Lands End, Eng. ^{1,2}	7,712 6,542 4,532
Amerikland	9 15.50	9 16.30	9 23.10	9 23.10	Swedish	391.0	72.9	34.0	Cruz Grande, Chile	New York, N. Y.	Sugar
Santa Inez	9 16.50	9 17.30	9 23.10	9 23.10	American	370.0	53.9	31.0	Valparaiso, Chile	New York, N. Y.	Iron ore
Nagasaki	9 17.50	9 18.30	9 23.10	9 23.10	British	350.0	61.2	34.0	Portland, Oreg.	Liverpool, England	2,493 6,255 4,016
Hancho V.	9 19.00	9 19.50	9 23.10	9 23.10	British	510.2	63.2	31.0	Talara, Peru	Halifax, N. S.	Crude oil
Hancho V.	9 23.30	9 23.30	9 23.10	9 23.10	British	510.2	63.2	31.0	Talara, Peru	Halifax, N. S.	Crude oil
Riedemann	10 6.30	10 8.31	10 20.20	10 20.20	Danzig	521.1	70.2	30.0	Talara, Peru	Hamburg, Germany	Naphtha
Alraham	10 10.55	10 11.38	10 21.38	11 19.55	Norwegian	435.9	56.2	26.2	Vancouver, B. C.	Oslo, Norway	General
Lincoln	10 14.20	10 15.09	10 22.55	11 1.15	British	400.3	52.0	24.6	Vancouver, B. C.	Halifax, N. S.	Lumber-general
Miller	10 14.25	10 15.24	10 23.10	10 23.10	American	399.7	56.2	27.0	Portland, Oreg.	New York, N. Y.	Lumber
Alamar	10 14.25	10 15.24	10 23.10	10 23.10	American	399.7	56.2	27.0	Portland, Oreg.	New York, N. Y.	Lumber
Mathew	10 14.30	10 15.44	11 00.55	11 00.55	American	434.3	57.7	27.0	Portland, Oreg.	Mobile, Ala.	General
Luckenbach	10 15.30	10 17.05	11 2.55	11 20.38	Norwegian	351.0	51.3	23.6	Vancouver, B. C.	Bristolchannel	(*)
Bryne	10 8.30	10 20.44	11 13.33	13 5.10	British	420.5	54.4	26.0	Los Angeles, Calif.	Beaumont, Tex.	Diesel oil
Tamaha	10 19.55	10 20.55	11 13.50	11 13.50	Danish	335.6	54.9	25.0	Tocopilla, Chile	Panama	Nitrates
Nordhavet	10 19.55	10 20.55	11 13.50	11 13.50	Danish	335.6	54.9	25.0	Tocopilla, Chile	Panama	Nitrates

* Tanker. ¹ Coffee, cocoa, and hides. ² Manganese, coffee, and cotton. ³ Wheat, lumber, and general. All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

Date	Vessel	Line	From	Vessel	Date	Vessel	Line	For
January 4	Guadalupe	French Line	St. Nazaire via waypoints.	Tolon	January 4	United Fruit Co.	New York via Habana.	8,300 6,800
January 4	Tolon	United Fruit Co.	Port Limon, Costa Rica.	Catala	January 4	Standard Fruit & S. S. Co.	New Orleans and waypoints.	5,142
January 4	Cundinamarca C-33	United Fruit Co.	Barranquilla and waypoints.	Conon	January 4	Panama R. I., S. S. Line	New York via Haiti.	6,802 6,829
January 6	Nagasaki	United Fruit Co.	New York via waypoints.	Cundinamarca C-33	January 6	Seattle Airplane Co.	Barranquilla and waypoints.	7,400 5,132
January 6	Venezuela	Pan American Airways	Hamburg via waypoints.	Guadalupe	January 7	French Line	Havre via waypoints.	562 1,632
January 6	Dayton	Royal Netherland S. S. Co.	Liverpool via waypoints.	Dayton	January 7	Royal Netherland S. S. Co.	Port Limon, Costa Rica.	4,200 3,983
January 6	No. 309-N	Leyland S. S. Line	Talara via waypoints.	Abogaez	January 7	United Fruit Co.	Port Limon, Costa Rica.	7,712 6,542
January 7	Metpan	Pan American Airways	Liverpool via waypoints.	Trinidad	January 8	United Fruit Co.	Port Limon, Costa Rica.	7,400 6,955
January 7	Inona	United Fruit Co.	New York via Kingston.	Metpan	January 8	United Fruit Co.	Port Limon, Costa Rica.	21,650 15,560
January 7	No. 9570	Pan American Airways	New Orleans, La.	Trinidad	January 8	United Fruit Co.	Port Limon, Costa Rica.	2,493 6,255
January 7	Anacucuma	Pan American Airways	San Salvador and waypoints.	Gruewald	January 8	United Fruit Co.	Port Limon, Costa Rica.	4,373 9,446
January 7	Gruewald	United Fruit Co.	Colon, Rep. of Panama.	Cumden	January 9	Hamburg-American Line	Port Limon, Costa Rica.	15,500 11,573
January 8	Gruewald	United Fruit Co.	Tampico, D. W. I.	Cumden	January 9	United Fruit Co.	New York via waypoints.	15,200 12,535
January 8	Cumden	Hamburg-American Line	Caracas, D. W. I.	Cundinamarca C-33	January 9	United Fruit Co.	Barranquilla and waypoints.	7,419 8,005
January 8	Cundinamarca C-33	United Fruit Co.	Barranquilla and waypoints.	Inona	January 10	Standard Fruit & S. S. Co.	New Orleans and waypoints.	5,934 5,992
January 8	Pan American Airways	Pan American Airways	Miami via waypoints.	Alandida	January 10	Standard Fruit & S. S. Co.	New Orleans and waypoints.	7,940 7,981
January 8	Standard Fruit & S. S. Co.	Standard Fruit & S. S. Co.	New York via Habana.	Abogaez	January 10	Royal Netherlands S. S. Co.	Amsterdam and waypoints.	7,940 7,981
January 9	Bogota	Colombian S. S. Line	New York via waypoints.	Abogaez	January 10	United Fruit Co.	New Orleans and waypoints.	8,000 6,991

* Other than ships passing through the Canal. ¹ Air mail carrier. ² Motor boat.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CHRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
January 10 . . .	Swiftwind	Shell-Eastern Petroleum Co.	Curacao, D. W. I.	January 10 . . .	Daytonian	Leyland S. S. Line	Liverpool via wayports.
January 10 . . .	Venezuela	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.				
January 10 . . .	Irióna	United Fruit Co.	Port Limon, Costa Rica.				
January 10 . . .	Abangarez	United Fruit Co.	Port Limon, Costa Rica.				
January 10 . . .	Daytonian	Leyland S. S. Line	Port Limon, Costa Rica.				
January 10 . . .	Heredia	United Fruit Co.	New Orleans, La.				
January 10 . . .	No. 145-M ²²	Pan American Airways	La Guayra via wayports.				
January 10 . . .	No. 9954 ²²	Pan American Airways	San Salvador and waypts.				
January 10 . . .	No. 945-M ²²	Pan American-Graeco Airways	Talara via wayports.				
January 10 . . .	No. 670-M ²²	Pan American Airways	Miami via wayports.				

²² Air mail carrier.

PORT OF BALBOA.

January 5	Frost ²³	West India Oil Co.	Talara, Peru	January 6	Frost ²³	West India Oil Co.	Puntarenas, Costa Rica.
January 9	Nueva Panama ²³	Franz Elliot	Panama, R. P.	January 9	Nueva Panama ²³	Franz Elliot	Panama, R. P.
January 9	Liberator ²⁴	A. Valdez	Panama, R. P.	January 9	Liberator ²⁴	A. Valdez	Panama, R. P.
January 9	Ola Marina ²⁴	A. Valdez	Panama, R. P.	January 9	Ola Marina ²⁴	A. Valdez	Panama, R. P.
January 10	Ontarolite ²³	Standard Shipping Co.	Los Angeles, Calif.				

²³ Motor ship.²⁴ Motor boat.

* Other than ships passing through the Canal.

Commercial Traffic Through the Panama Canal in December, 1930, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of December, 1930, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for December, 1929 and 1928. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States.....	74	394,750	300,132	485,041	300,133	\$340,514.81	171,818
Europe to west coast of Canada:							
British.....	11	58,333	39,208	63,694	39,394	42,622.33	2,995
Danish.....	3	18,981	14,381	23,769	14,884	17,976.25	7,180
Dutch.....	2	13,679	10,642	16,989	10,604	13,302.50	3,923
French.....	2	11,677	6,529	14,048	7,114	8,161.25	3,133
German.....	4	25,502	16,971	27,929	17,272	20,151.16	7,251
Italian.....	2	15,853	12,299	20,008	12,480	15,373.75	2,463
Norwegian.....	1	6,140	5,261	8,518	5,341	6,576.25	6,747
Swedish.....	1	5,661	3,406	5,641	4,320	4,257.50	7,701
United States.....	1	6,020	4,821	7,583	4,826	6,026.25	2,429
Total.....	27	161,846	113,518	188,179	116,235	134,447.24	43,822
East coast of United States to west coast of South America:							
British.....	7	34,448	28,348	50,289	29,034	25,359.37	1,429
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	1,686
Danish.....	1	4,756	2,747	4,553	2,759	3,433.75	1,911
Swedish.....	2	8,917	7,486	30,676	8,762	6,420.24	.....
United States.....	11	45,296	38,898	74,319	34,949	40,065.50	15,773
Total.....	22	98,089	80,912	167,147	79,480	79,570.11	20,799
Europe to west coast of United States:							
British.....	7	36,268	29,361	46,752	29,524	26,112.96	.....
Danish.....	1	6,054	5,058	8,271	5,057	4,358.88	.....
Dutch.....	2	13,767	11,034	17,550	10,709	11,695.52	1,398
German.....	2	10,996	8,602	14,285	8,541	9,174.80	3,498
Japanese.....	1	4,117	3,228	5,155	3,654	2,964.24	.....
Norwegian.....	5	23,740	20,295	33,882	20,101	18,346.85	.....
Swedish.....	1	4,860	2,781	4,960	3,665	3,476.25	4,333
United States.....	1	8,619	7,026	11,247	6,954	6,205.68	.....
Total.....	20	110,421	87,385	142,102	89,205	82,335.18	9,229
East coast of United States to Far East:							
British.....	8	43,279	27,926	46,704	27,704	34,907.50	26,340
Japanese.....	7	39,244	31,839	50,459	31,426	39,798.75	27,307
Norwegian.....	1	6,829	3,973	6,087	4,085	4,966.25	2,097
United States.....	3	16,809	12,675	20,316	12,658	15,843.75	22,059
Total.....	19	108,161	76,413	124,166	75,873	95,516.25	77,803
Europe to west coast of South America:							
British.....	5	30,198	24,416	39,989	24,638	30,520.00	15,378
Dutch.....	2	11,786	6,743	11,343	6,628	8,428.75	6,677
French.....	2	9,098	7,534	12,076	7,533	9,417.50	4,443
German.....	4	18,229	13,780	21,896	13,538	17,225.00	9,345
Greek.....	1	4,292	2,720	4,349	2,686	3,090.24	.....
Italian.....	2	15,981	11,277	19,543	12,798	14,096.25	2,843
Norwegian.....	1	3,930	3,137	5,128	3,129	3,921.25	6,105
Spanish.....	1	3,054	2,095	3,518	2,079	2,198.88	.....
Total.....	18	96,568	71,702	117,842	73,029	88,897.87	44,791
Cristobal to west coast of South America:							
Colombian.....	3	446	437	673	441	527.65	807
Dutch.....	2	1,484	588	1,560	646	735.00	107
German.....	5	4,502	2,766	5,467	2,856	3,457.50	969
Total.....	10	6,432	3,791	7,700	3,943	4,720.15	1,883

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Europe to Australasia:							
British.....	7	65,025	45,331	75,260	46,523	\$52,846.68	25,884
Swedish.....	1	6,098	3,302	5,819	4,061	4,127.50	1,050
Total.....	8	71,123	48,633	81,079	50,584	56,974.18	26,934
East coast of United States to Australasia:							
British.....	6	34,159	23,606	37,550	23,524	29,507.50	17,597
United States.....	1	5,172	3,825	6,215	3,857	4,781.25	1,200
Total.....	7	39,331	27,431	43,765	27,381	34,288.75	18,797
East coast of United States to west coast of Canada:							
British.....	2	8,408	6,416	10,286	6,450	6,053.76	.....
Danish.....	1	5,064	2,750	4,732	2,865	3,437.50	.....
United States.....	3	16,343	11,691	18,849	11,681	14,613.75	24,866
Total.....	6	29,815	20,857	33,867	20,996	24,105.01	24,866
East coast of United States to Philippine Islands:							
British.....	2	12,646	7,072	13,341	7,473	8,840.00	5,130
Danish.....	1	2,510	1,938	3,252	1,985	2,422.50	1,933
United States.....	2	12,009	10,211	14,631	10,217	12,763.75	8,326
Total.....	5	27,165	19,221	31,224	19,675	24,026.25	15,389
Around the world:							
British.....	1	18,874	13,130	27,132	15,352	16,412.50	.....
United States.....	2	22,856	18,880	31,120	18,880	23,600.00	6,813
Total.....	3	41,730	32,010	58,252	34,232	40,012.50	6,813
Cristobal to west coast of United States:							
United States.....	3	7,291	5,330	8,947	5,304	5,064.11	124
Cristobal to west coast of Central America:							
British.....	3	3,028	2,568	4,831	2,715	3,210.00	1,990
Foreign vessels in ballast—United States intercoastal:							
British.....	1	3,813	2,677	4,281	2,663	2,754.36	.....
Norwegian.....	1	4,375	2,431	4,000	2,485	3,038.75	.....
Total.....	2	8,188	5,108	8,281	5,148	5,784.11	.....
Canadian intercoastal:							
British.....	2	8,368	6,640	11,222	6,954	8,300.00	7,350
East coast of Canada to Australasia:							
British.....	2	9,659	7,681	12,548	7,657	9,601.25	6,631
East coast of Canada to Far East:							
Danish.....	1	4,066	3,142	5,177	3,199	3,927.50	4,733
Japanese.....	1	4,658	4,268	5,827	4,228	5,335.00	7,491
Total.....	2	8,724	7,410	11,004	7,427	9,262.50	12,224
East coast of South America to west coast of United States:							
United States.....	2	10,051	7,354	11,525	7,285	9,192.50	8,969
East coast of South America to west coast of Canada:							
Norwegian.....	2	10,533	5,879	9,768	6,004	7,348.75	7,491
East coast of Central America to west coast of South America:							
British.....	1	4,408	4,039	6,430	4,052	5,048.75	8,349
United States.....	1	558	425	1,013	425	401.76	.....
Total.....	2	4,966	4,464	7,443	4,477	5,450.51	8,349
West Indies to west coast of South America:							
British.....	1	3,326	2,872	4,800	2,949	3,590.00	4,511
United States.....	1	875	831	1,819	880	1,038.75	20
Total.....	2	4,201	3,703	6,619	3,829	4,628.75	4,531

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of United States to Hawaii:							
United States.....	1	5,450	3,465	5,687	3,450	\$4,331.25	7,966
East coast of United States to Balboa:							
United States.....	1	675	633	1,198	742	486.00	.....
East coast of United States to west coast of Central America:							
British.....	1	4,419	3,524	5,622	3,547	4,405.00	6,236
East coast of Canada to west coast of United States:							
Norwegian.....	1	4,561	2,923	4,904	2,939	3,653.75	4,628
South American intercoastal:							
Colombian.....	1	307	302	405	308	368.40	650
East coast of South America to Far East:							
Japanese.....	1	5,821	4,170	7,267	4,387	5,212.50	3,212
Central American intercoastal:							
Colombian.....	1	124	113	207	109	141.25	206
East coast of Central America to Australasia:							
British.....	1	4,076	3,188	5,041	3,192	3,985.00	6,502
Europe to west coast of Central America:							
German.....	1	2,337	1,384	2,359	1,354	1,730.00	1,709
Africa to west coast of Canada:							
British.....	1	4,212	2,996	4,803	2,976	3,032.64	.....
Cristobal to Balboa:							
Panamanian.....	1	20	15	20	16	14.40	.....
Grand total, December, 1930..	252	1,292,442	960,855	1,610,065	969,586	1,100,610.97	551,712
Grand total, December, 1929..	274	1,356,879	1,012,797	1,666,837	1,018,344	1,165,293.25	843,747
Grand total December, 1928..	315	1,463,621	1,108,243	1,797,394	1,102,512	1,261,608.18	867,504

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	79	430,746	323,954	526,159	324,282	\$404,942.50	599,952
West coast of Canada to Europe:							
Belgian.....	2	8,045	7,273	10,173	7,462	9,091.25	13,700
British.....	24	120,930	87,121	140,842	86,986	108,901.25	164,892
Danish.....	2	10,966	9,411	13,550	9,441	11,763.75	18,775
Dutch.....	2	14,332	11,060	17,875	11,184	13,825.00	18,325
French.....	1	7,146	4,020	8,068	4,497	5,025.00	8,768
German.....	4	26,652	17,509	30,001	17,878	21,886.25	34,418
Japanese.....	2	10,402	9,549	14,090	9,375	11,775.10	17,035
Norwegian.....	3	16,528	10,879	17,818	11,042	13,598.75	23,596
United States.....	4	21,853	14,909	24,179	14,897	18,636.25	31,140
Total.....	44	236,854	171,731	276,596	172,762	214,502.60	330,649
West coast of South America to Europe:							
British.....	12	64,846	49,158	81,285	50,041	61,447.50	89,015
Chilean.....	1	2,086	1,233	2,370	1,547	1,541.25	660
Danzig.....	1	6,127	5,268	8,939	5,007	6,585.00	11,236
Dutch.....	2	12,119	6,286	11,087	6,661	7,857.50	15,583
French.....	2	9,285	7,932	12,504	7,787	9,915.00	14,546
German.....	6	31,051	22,767	36,784	22,331	28,458.75	46,529
Italian.....	1	4,151	3,603	5,963	3,491	4,503.75	8,324
Norwegian.....	2	10,211	6,590	11,134	6,555	8,237.50	17,627
Spanish.....	1	3,084	2,516	3,830	2,441	3,145.00	5,800
Swedish.....	1	4,078	3,197	5,024	3,831	3,996.25	6,775
Yugoslav.....	2	9,195	5,974	9,586	5,999	7,467.50	16,398
Total.....	31	156,233	114,524	188,511	115,691	143,155.00	232,793
West coast of South America to east coast of United States:							
British.....	5	21,055	18,287	32,019	19,198	22,858.75	38,457
Chilean.....	2	10,164	6,652	12,658	7,201	8,315.00	11,273
Danish.....	1	4,558	2,734	4,553	2,785	3,417.50	7,903
Swedish.....	2	8,917	7,486	30,676	8,762	9,357.50	44,288
United States.....	8	33,485	23,202	41,073	23,096	29,002.50	27,209
Total.....	18	78,179	58,361	120,979	61,042	72,951.25	129,130

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of United States to Europe:							
British.....	5	23,596	19,681	30,984	18,972	\$24,575.50	30,870
Danish.....	1	5,341	4,257	6,650	4,247	5,321.25	8,526
French.....	1	5,196	3,349	5,693	3,499	4,186.25	6,977
German.....	2	10,190	7,593	12,448	7,462	9,491.25	15,649
Italian.....	2	10,431	8,098	13,168	8,343	10,122.50	12,019
Japanese.....	1	4,658	4,269	5,827	4,228	5,336.25	7,800
Norwegian.....	3	14,972	12,698	21,202	12,641	15,872.50	28,663
Total.....	15	74,384	59,945	95,972	59,392	74,905.50	110,504
West coast of South America to Cristobal:							
Colombian.....	4	790	788	1,104	806	813.30	565
Dutch.....	2	1,484	588	1,560	646	735.00	1,131
German.....	6	5,200	3,384	6,470	3,472	4,230.00	3,444
Total.....	12	7,474	4,760	9,134	4,924	5,778.30	5,140
West coast of Canada to east coast of United States:							
Danish.....	1	4,751	2,699	4,488	2,738	3,373.75	7,200
Norwegian.....	5	24,555	13,436	22,646	13,478	16,795.00	33,641
United States.....	1	2,643	2,030	3,284	1,997	2,537.50	3,514
Total.....	7	31,949	18,165	30,418	18,213	22,706.25	44,355
Australasia to Europe:							
British.....	6	51,265	35,544	59,308	37,100	44,430.00	37,980
Philippine Islands to east coast of United States:							
Japanese.....	2	11,530	8,817	14,016	8,588	11,021.25	8,064
Norwegian.....	1	3,735	2,075	3,549	2,098	2,593.75	6,050
Panamanian.....	1	6,955	3,998	7,044	3,988	4,997.50	2,535
United States.....	1	3,719	3,673	5,187	3,686	4,462.80	6,700
Total.....	5	25,939	18,563	29,796	18,360	23,075.30	23,349
West coast of Central America to Cristobal:							
British.....	4	3,734	3,206	6,001	3,369	4,007.50	1,376
Colombian.....	1	124	113	207	109	89.28	.....
Total.....	5	3,858	3,319	6,208	3,478	4,096.78	1,376
Far East to east coast of United States:							
Japanese.....	2	12,525	10,278	16,730	10,092	12,847.50	6,710
United States.....	1	5,901	4,834	7,573	4,826	6,042.50	4,151
Total.....	3	18,426	15,112	24,303	14,918	18,890.00	10,861
Australasia to east coast of United States:							
British.....	1	4,307	3,186	5,047	3,077	3,982.50	7,600
Norwegian.....	1	4,944	2,666	4,562	2,760	3,332.50	7,349
United States.....	1	5,002	4,549	5,867	3,660	5,686.25	7,505
Total.....	3	14,253	10,401	15,476	9,497	13,001.25	22,454
West coast of United States to Cristobal:							
United States.....	3	7,291	5,330	8,947	5,303	6,662.50	2,308
West coast of South America to east coast of Canada:							
British.....	2	11,821	10,370	18,512	10,163	12,962.50	24,700
Norwegian.....	1	6,287	5,474	8,998	5,217	6,842.50	12,540
Total.....	3	18,108	15,844	27,510	15,380	19,805.00	37,240
Balboa to Cristobal:							
Panamanian.....	1	20	15	20	16	14.40	.....
United States.....	1	950	923	1,768	981	1,140.00	120
Total.....	2	970	938	1,788	997	1,154.40	120
West coast of United States to east coast of Central America:							
Norwegian.....	1	2,080	1,305	2,166	1,298	1,631.25	2,502

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Canadian intercoastal:							
British.....	1	2,207	1,239	2,338	1,249	\$1,548.75	3,664
West coast of Canada to east coast of South America:							
Norwegian.....	1	5,131	2,906	4,884	3,004	3,632.50	3,503
Far East to West Indies:							
Japanese.....	1	5,979	5,121	8,151	5,043	6,401.25	8,534
Norwegian.....	1	4,240	2,446	4,297	2,443	3,057.50	7,380
Total.....	2	10,219	7,567	12,448	7,486	9,458.75	15,914
Australasia to east coast of Canada:							
British.....	1	5,494	4,403	7,178	4,413	5,503.75	1,340
Central American intercoastal:							
Colombian.....	1	124	113	207	109	141.25	38
Grand total, December, 1930..	243	1,181,184	874,024	1,450,326	878,898	1,091,972.88	1,615,172
Grand total, December, 1929..	248	1,191,892	917,138	1,507,121	920,818	1,143,737.63	1,681,187
Grand total, December, 1928..	264	1,234,519	947,405	1,562,337	954,421	1,181,421.21	1,847,483

United States Intercoastal Traffic by Commodities for December, 1930.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the totals for December, 1930, and the totals for December, 1929 and 1928. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Agricultural implements.....	713	15	728
Alfalfa.....		1,298	1,298
Alfalfa meal.....		927	927
Ammonia.....	506		506
Asbestos.....	68		68
Asphalt.....		200	200
Automobiles.....	6,144	73	6,217
Automobile accessories.....	373	19	392
Bamboo.....		50	50
Barley.....	3	456	459
Beans.....	35	9,253	9,288
Borax.....	15	435	450
Bricks.....	106		106
Burlap.....	67	88	155
Calcium carbide.....	194		194
Camphor.....		70	70
Canned:			
Fish.....	231	11,176	11,407
Fruit.....	1,656	24,081	25,737
Meat.....	20	800	820
Milk.....	10	27	37
Soup.....	1,029	136	1,165
Vegetables.....	359	4,952	5,311
Miscellaneous.....	1,863	7,746	9,609
Carbon black.....	119	104	223
Celite filtercel.....		1,075	1,075
Cement.....	129	20	149
Charcoal.....	327		327
Chemicals.....	2,184	1,056	3,240
China and fire clay.....	68	102	170
Coal.....	75		75
Cocoa.....	97		97

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Coconuts.....	29	142	171
Coffee.....	105	210	315
Coke.....	263		263
Cold storage:			
Cheese.....	90		90
Eggs.....		2	2
Fish.....	25		25
Lard.....	83		83
Meat.....		14	14
Other.....	319	125	444
Confectionery.....	517		517
Copra.....		300	300
Cork.....	48		48
Corn.....	75		75
Cotton.....	191	1,842	2,033
Cottonseed meal.....		293	293
Cyanide.....	71	53	124
Drugs.....	969	97	1,066
Earthenware.....	19	2	21
Fertilizer.....	480	18	498
Fish meal.....		93	93
Flour.....	138	7,038	7,176
Fruit:			
Dried.....	8	11,080	11,088
Fresh.....		392	392
Fuller's earth.....	469	152	621
Furniture.....	230	57	287
General.....	41,391	11,152	52,543
Glass and glassware.....	1,178	135	1,313
Glue.....		50	50
Granite.....	101		101
Gum.....		20	20
Hair.....		31	31
Hardwoods.....	1,246	68	1,314
Hats.....		5	5
Hay.....		777	777
Hemp.....	35	488	523
Honey.....		70	70
Hops.....		37	37
Infusorial earth.....		256	256
Ink.....	2		2
Jute.....	157		157
Lard substitute.....	1,637		1,637
Lime.....	80		80
Linoleum.....	635	120	755
Liquors.....	250		250
Lumber.....	1,537	185,922	187,459
Malt.....	101		101
Manufactured goods:			
Iron and steel.....	72,304	823	73,127
Machinery.....	3,235	663	3,898
Railroad material.....	6,551		6,551
Tinplate.....	7,944	5	7,949
Textiles.....	4,562	262	4,824
Miscellaneous.....	6,207	1,729	7,936
Matches.....	212		212
Metals:			
Antimony.....		20	20
Chrome.....	46		46
Copper.....		3,993	3,993
Iron.....	1,451	11	1,462
Lead.....	46	1,431	1,477
Scrap.....	121	197	318
Tin.....	15	40	55
Zinc.....	13	1,031	1,044
Other.....	5		5
Milk, powdered.....	25	545	570
Molasses.....	190		190
Musical instruments.....	12	13	25
Nuts.....		168	168
Oats.....	167	235	402
Oils:			
Cottonseed.....	69		69
Gas oil, fuel oil.....	15	79,156	79,171
Gasoline, benzine, naphtha.....	104	174,149	174,253
Kerosene.....	100	2,285	2,385
Lubricating and greases.....	4,665	1,746	6,411
Olive.....		30	30
Vegetable.....	168	109	277
Whale.....		700	700
Wood.....	24		24
Ores:			
Chrome.....	162		162
Lead.....	346		346
Magnesite.....		1,108	1,108
Manganese.....	1,200		1,200
Zinc.....		519	519
Other.....		190	190

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Paint.....	353	36	389
Paper.....	3,353	8,709	12,062
Paper pulp.....		13,147	13,147
Peanuts.....	389		389
Phosphates.....	285		285
Porcelain.....	127	190	317
Rags.....		211	211
Rice.....	1,535	527	2,062
Rope.....	188	160	348
Rosin.....	1,113		1,113
Rubber, manufactured.....	963	91	1,054
Salt.....	100		100
Seeds:			
Canary.....		44	44
Cotton.....		64	64
Grass.....		14	14
Hemp.....		60	60
Other.....	4	299	303
Shells.....	808	37	845
Silk.....		1,373	1,373
Silversand.....		85	85
Skins and hides.....		1,860	1,860
Slag.....	516		516
Slate.....	297		297
Sosp.....	2,096	80	2,176
Soda.....	265		265
Soda ash.....	570		570
Soda, bicarbonate.....	142		142
Soda, caustic.....	148		148
Starch.....	115		115
Sugar.....	38	5,659	5,697
Sulphur.....	10,224		10,224
Syrup.....	65		65
Talc.....	20	50	70
Tallow.....		439	439
Tar.....	74		74
Tea.....	25	45	70
Tobacco.....	1,209	33	1,242
Toys.....	3	5	8
Turpentine.....	106		106
Vegetables.....	9	281	290
Waste.....		193	193
Wax.....	165	60	225
Wheat.....		162	162
Wine.....		97	97
Wool.....		1,031	1,031
Total, December, 1930.....	204,134	591,400	795,534
Total, December, 1929.....	255,777	602,357	858,134
Total, December, 1928.....	255,565	508,529	764,094

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending January 10, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Tsuyama Maru.....	Nippon Yusen Kaisha.....	December 24..	December 25..	201	
Santa Barbara.....	Grace Line.....	December 25..	December 25..	114	
Saramacca.....	United Fruit Co.....	December 26..	December 27..	398	85
Acajutla.....	Pacific Steam Navigation Co.....	December 27..	December 27..	6	
Tongking.....	East Asiatic Co.....	December 29..	December 30..	33	
Guatemala.....	Panama Mail S. S. Co.....	December 30..	December 30..	36	42
Colombia.....	Panama Mail S. S. Co.....	December 31..	January 1..	7	
Esparta.....	United Fruit Co.....	January 2..	January 2..		40
Cauca.....	National Navigation Co.....	January 3..	January 3..	27	
Santa Rita.....	Grace Line.....	January 3..	January 3..	68	
Frost.....	West India Oil Co.....	January 5..	January 7..	225	47
San Mateo.....	United Fruit Co.....	January 5..	January 6..	80	
Santa Maria.....	Grace Line.....	January 5..	January 5..	19	
Hokuroku Maru.....	Osaka Shosen Kaisha.....	January 7..	January 7..	74	
Salinas.....	U. S. Government.....	January 7..		9	
Santa Clara.....	Grace Line.....	January 8..	January 8..	89	
Plow City.....	Nelson Line.....	January 8..	January 9..	40	
Bokuyo Maru.....	Nippon Yusen Kaisha.....	January 8..	January 8..	15	
City of San Francisco.....	Panama Mail S. S. Co.....	January 8..	January 8..	29	
Santa Inez.....	Grace Line.....	January 9..	January 10..	1	1
California.....	Panama-Pacific Line.....	January 9..	January 9..		153
Ontariolite.....	Standard Shipping Co.....	January 10..	January 11..	12,003	
Tamaha.....	Standard Transportation Co.....	January 10..	January 11..	9,226	

Handling and Transporting Explosives.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., January 3, 1931.

CIRCULAR No. 730-2.

Sub-paragraphs (i) and (j), paragraph 9, of Circular No. 730-1, dated September 29, 1930, are amended to read as follows:

(i) Vehicles transporting explosives of Class I or Class II (c) (Fireworks or Pyrotechnics) when in commercial shipments, gasoline in tank trucks, or gasoline in excess of 50 gallons in containers, will not be transported on the Panama Canal ferries on the passenger-carrying trips of these craft. The regular trip leaving the East side of the Canal at 8.30 a. m. is hereby designated for carrying vehicles transporting prohibited explosives or gasoline, as herein described, if presented for transfer across the Canal at that time. Gasoline containers shall be either standard substantial gasoline drums with screw bungs or metal cans with screw tops. All such containers shall be free from leaks and shall not be completely filled. At least 2 per cent of total capacity shall be left vacant in order to avoid leakage or distortion of containers due to expansion of contents from increase in temperature.

(j) Explosives for military purposes, which are not permitted under the regulations to be carried by Panama Canal ferries on passenger trips, will be transported for the Army or the Navy by special arrangement, if the 8.30 a. m. trip does not serve their purpose.

J. L. SCHLEY,
Acting Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending January 10, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Aneon.....	Panama R. R. S. S. Line.....		January 4.....		525
Cefalu.....	Standard Fruit & S. S. Co.....		January 4.....		324
Tolosa.....	United Fruit Co.....	January 4.....	January 4.....	32	160
Margaret Johnson.....	Johnson S. S. Line.....	January 4.....	January 5.....	(*)	656
Guadeloupe.....	French Line.....	January 4.....	January 7.....	39	214
Champerico.....	Pacific Steam Navigation Co.....	January 4.....	January 10.....	32	160
Agira.....	North German Lloyd.....		January 5.....		392
Santa Maria.....	Grace Line.....	January 5.....	January 6.....	239	124
Los Angeles.....	Hamburg-American Line.....	January 5.....	January 6.....	174	56
Caldas.....	National Navigation Co.....	January 5.....	January 9.....	172	223
Daytonian.....	Leyland S. S. Line.....	January 6.....	January 7.....	267	(*)
Venezuela.....	Royal Netherlands S. S. Co.....	January 6.....	January 7.....	49	(*)
Boskoop.....	Royal Netherlands S. S. Co.....	January 6.....	January 7.....	151	236
Abangarez.....	United Fruit Co.....	January 6.....	January 7.....	397	‡
San Mateo.....	United Fruit Co.....	January 6.....	January 9.....	1,113	(*)
Nosa Prince.....	N. O. & S. A. S. S. Co.....	January 7.....	January 7.....	(*)	31
Iowa.....	French Line.....	January 7.....	January 7.....	5	(*)
Metapan.....	United Fruit Co.....	January 7.....	January 8.....	605	28
Hokuroku Maru.....	Osaka Shosen Kaisha.....	January 7.....	January 8.....	51	70
Iriona.....	United Fruit Co.....	January 7.....	January 8.....	815	(*)
Manizales.....	North German Lloyd.....	January 7.....	January 10.....	334	131
Grunewald.....	Hamburg-American Line.....	January 8.....	January 8.....	(*)	167
Pensylvania.....	French Line.....	January 8.....	January 8.....	60	162
City of Elwood.....	Roosevelt S. S. Line.....	January 8.....	January 9.....	394	(*)
Oroya.....	Pacific Steam Navigation Co.....	January 8.....	January 9.....	58	11
Santa Clara.....	Grace Line.....	January 8.....	January 8.....	57	41
Camden.....	United Fruit Co.....	January 8.....	January 9.....	6,924	(*)
President Wilson.....	Dollar Line.....	January 9.....	January 9.....	2	(*)
City of San Francisco.....	Panama Mail S. S. Co.....	January 9.....		1,202	
Bogota.....	Colombian S. S. Line.....	January 9.....		26‡	
Durazzo.....	Hamburg-American Line.....	January 9.....		562	
Arizona.....	French Line.....	January 9.....	January 9.....	29	205
Atlantida.....	Standard Fruit & S. S. Co.....	January 9.....	January 10.....	63‡	327
Rialto.....	Nav. Libera-Triestina.....	January 9.....	January 10.....	107	(*)
Daytonian.....	Leyland S. S. Line.....	January 10.....	January 10.....	(*)	130
Venezuela.....	Royal Netherlands S. S. Co.....	January 10.....	January 10.....	(*)	963
Wido.....	North German Lloyd.....	January 10.....		86	
Anagir.....	North German Lloyd.....	January 10.....	January 10.....	1	357
Iriona.....	United Fruit Co.....	January 10.....	January 10.....	(*)	118
Santa Inez.....	Grace Line.....	January 10.....	January 10.....	170	119
Heredia.....	United Fruit Co.....	January 10.....			
Swiftwind.....	C. D. Mallory & Co.....	January 10.....	January 10.....	11,892	(*)
Abangarez.....	United Fruit Co.....	January 10.....	January 10.....	60	358
Waunta.....	Standard Fruit & S. S. Co.....	January 10.....		416	
Abraham Lincoln.....	Fred Olsen & Co.....	January 10.....		247	
Moerdijk.....	Holland-America Line.....	January 10.....		200	
Lochkatrine.....	Royal Mail S. P. Co.....	January 10.....		18	

* No cargo discharged.

‡ No cargo laded.

‡ 3 cases.

Traffic by Nationality for December, 1930.

The following tabulation shows the commercial traffic through the Canal during the month of December, 1930, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for December, 1929 and 1928:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	69	338,947	230,999	470,575	286,321	\$317,100.60	136,322
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	1,686
Colombian.....	5	877	852	1,285	858	1,037.30	1,663
Danish.....	8	41,431	30,016	49,754	30,749	35,556.38	15,757
Dutch.....	8	40,716	29,007	47,442	28,587	34,161.77	12,105
French.....	4	20,775	14,063	26,124	14,647	17,578.75	7,576
German.....	16	61,566	43,503	71,936	43,561	51,738.46	22,772
Greek.....	1	4,292	2,720	4,349	2,656	3,090.24	.....
Italian.....	4	31,834	23,576	39,551	25,278	29,470.00	5,306
Japanese.....	10	53,840	43,505	68,703	43,695	53,310.49	38,010
Norwegian.....	12	62,108	43,899	72,887	44,084	47,851.85	27,068
Panamanian.....	1	20	15	20	16	14.40	.....
Spanish.....	1	3,054	2,095	3,518	2,079	2,198.88	.....
Swedish.....	5	25,536	16,975	47,096	20,808	18,281.49	13,084
United States.....	107	552,774	426,197	699,510	422,241	484,929.11	270,363
Total, December, 1930...	252	1,292,442	990,855	1,610,065	969,586	1,100,610.97	551,712
Total, December, 1929...	274	1,356,879	1,012,797	1,666,837	1,018,344	1,165,293.25	843,747
Total, December, 1928...	315	1,463,621	1,108,243	1,797,394	1,102,512	1,261,608.18	867,504

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	8,045	7,273	10,173	7,462	\$9,091.25	13,700
British.....	61	309,255	232,195	383,514	234,568	290,218.00	399,894
Chilean.....	3	12,250	7,885	15,028	8,748	9,856.25	11,933
Colombian.....	6	1,038	1,014	1,518	1,024	1,043.83	603
Danish.....	5	25,616	19,101	29,241	19,211	23,876.25	42,404
Danzig.....	1	6,127	5,268	8,939	5,007	6,585.00	11,236
Dutch.....	6	27,935	17,934	30,522	18,491	22,417.50	35,339
French.....	4	21,627	15,301	26,265	15,783	19,126.25	30,291
German.....	18	73,093	51,253	85,703	51,143	64,066.25	100,040
Italian.....	3	14,582	11,701	19,136	11,834	14,626.25	20,343
Japanese.....	8	45,094	38,034	58,814	37,326	47,381.35	48,143
Norwegian.....	19	92,683	60,475	101,256	60,536	75,593.75	142,851
Panamanian.....	2	6,975	4,013	7,064	4,004	5,011.90	2,535
Spanish.....	1	3,084	2,516	3,830	2,441	3,145.00	5,800
Swedish.....	3	12,995	10,683	35,700	12,593	13,353.75	51,063
United States.....	99	511,500	383,404	624,037	382,728	479,112.80	682,599
Yugoslav.....	2	9,195	5,974	9,586	5,999	7,467.50	16,398
Total, December, 1930...	243	1,181,184	874,024	1,450,326	878,898	1,091,972.88	1,615,172
Total, December, 1929...	248	1,191,892	917,138	1,507,121	920,818	1,143,737.63	1,681,187
Total, December, 1928...	264	1,234,519	947,405	1,562,337	954,421	1,181,421.21	1,847,483

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	8,045	7,273	10,173	7,462	\$9,091.25	13,700
British.....	130	698,202	513,194	854,089	520,889	607,318.60	536,216
Chilean.....	4	16,922	11,318	22,338	12,724	14,147.50	13,619
Colombian.....	11	1,915	1,866	2,803	1,882	2,081.13	2,266
Danish.....	13	67,047	49,117	78,995	49,960	59,432.63	58,161

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Danzig.....	1	6,127	5,268	8,939	5,007	\$6,585.00	11,236
Dutch.....	14	68,651	46,941	77,964	47,078	56,579.27	47,444
French.....	8	42,402	29,364	52,389	30,430	36,705.00	37,867
German.....	34	134,659	94,756	157,639	94,704	115,804.71	122,812
Greek.....	1	4,292	2,720	4,349	2,686	3,090.24	.....
Italian.....	7	46,416	35,277	58,687	37,112	44,096.25	25,649
Japanese.....	18	98,934	81,539	127,522	81,021	100,691.84	86,153
Norwegian.....	31	154,791	104,374	174,143	104,620	123,445.60	169,919
Panamanian.....	3	6,995	4,028	7,084	4,020	5,026.30	2,535
Spanish.....	2	6,138	4,611	7,348	4,520	5,343.88	5,800
Swedish.....	8	38,531	27,658	82,796	33,401	31,635.24	64,147
United States.....	206	1,064,364	809,601	1,323,547	804,969	964,041.91	952,962
Yugoslav.....	2	9,195	5,974	9,586	5,999	7,467.50	16,398
Total, December, 1930...	495	2,473,626	1,834,879	3,060,391	1,848,484	2,192,583.85	2,166,884
Total, December, 1929...	522	2,548,771	1,929,935	3,173,958	1,939,162	2,309,030.88	2,524,934
Total, December, 1928...	579	2,698,140	2,055,648	3,359,731	2,056,933	2,443,029.39	2,714,987

New Office Building for Panama Agencies Company.

Work was recently started at Old Cristobal on the erection of a new office building to house the offices of the Panama Agencies, a subsidiary of W. R. Grace & Company, operators of several steamship lines through the Panama Canal. The new building, which will be 100 feet by 68 feet, is to be of concrete construction, two stories in height, and will follow the same general architectural lines of other steamship buildings in the immediate vicinity. The new building is to be erected on the sites formerly occupied by the police station and post office, which were removed to the new Canal administration building on completion of that structure last year.

For many years W. R. Grace & Company have controlled vast interests on the west coast of South America, and they have contributed to Canal traffic regularly since the opening of the waterway. The present services of the Grace Line through the Canal consist of a weekly freight and passenger service between New York and west coast Colombian, Ecuadorian, Peruvian, and Chilean ports; a freight service (every 16 days) between New Orleans and the principal ports of South America (Nosa Line); and two services of a subsidiary, the Panama Mail Steamship Line; viz., a fortnightly intercoastal service between New York and San Francisco with calls at Habana, Puerto Colombia, Cartagena, Cristobal, Balboa, west coast Central American ports, Mazatlan, and Los Angeles; and a second west coast service between Cristobal, Canal Zone, and San Francisco with calls at Central American and Mexican west coast ports, and Los Angeles, every 22 days. In addition to its steamship interests, W. R. Grace & Company are heavily interested in the Pan American-Grace Airways, Inc., operating between Cristobal and points in South America.

The Panama Agencies Company also represents other steamship interests on the Isthmus, prominent among which are the Dollar Steamship Line, American-Hawaiian Steamship Line, Arrow Oil Co., Charles Nelson Company, Johnson Line, Nippon Yusen Kaisha, and the Roosevelt Line.

Cable Address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., January 21, 1931. No. 25.

Cargo Through the Canal During December, 1930.

On pages 352 and 353 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in December, 1930. This cargo, segregated according to direction as compared with December, 1929, and the differences, is shown in the following tabulation:

	December, 1929.	December, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	843,747	551,712	-292,035
Pacific to Atlantic.....	1,631,187	1,615,172	-66,015
Total.....	2,524,934	2,166,884	-358,050

It will be noted from the above that the Atlantic to Pacific tonnage decreased 292,035 tons (34.6 per cent) as compared with December, 1929, and that from the Pacific to the Atlantic decreased 66,015 tons (3.9 per cent), making a total decrease of cargo tonnage in both directions of 358,050 tons (14.2 per cent). As has been true for the past several months the general decline in the Pacific-bound tonnage has been occasioned by a general curtailment in practically all commodities normally routed in this direction. Last month's tonnage in this direction was the lowest since August, 1924, when 531,703 tons were passed through. As stated above, tonnage in the opposite direction showed comparatively little decrease in comparison with December, 1929, owing to heavier shipments in a great number of food products and nitrates.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-three and nine-tenths (63.9) per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 21.7 per cent in Europe. Tonnage from the United States decreased 181,180 tons (34 per cent) in comparison with December, 1929, and that from Europe declined 113,187 tons (48.5 per cent). The proportion of the total tonnage coming from the United States was approximately the same as in December, 1929, while the proportionate amount coming from Europe was lower in December, 1930.

Destination.—Forty-seven and two-tenths (47.2) per cent of the Pacific-bound cargo tonnage was destined to the United States; 19.1 per cent to Asia; 13.1 per cent to South America; and 12.0 per cent to Australasia. Tonnage to all these areas declined as compared with December, 1929, as follows: To the United States, 90,598 tons (25.8 per cent); to Asia, 84,411 tons (44.5 per cent); to South America, 57,243 tons (44.2 per cent); and to Australasia, 55,033 tons (45.4 per cent). With respect to the relation of the cargo destined to these areas to the total cargo in this direction, that to the United States registered a considerable increase, while that to the other principal areas declined.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 52.8 per cent came from the United States; 25.1 per cent from South America; 14.8 per cent from Canada; 3.8 per cent from Australasia; and 3.1 per cent from Asia. The amounts coming from Canada, Australasia, and Asia, showed relative as well as actual increases of 82,516 tons (52.5 per cent), 12,167 tons (24.5 per cent) and 12,371 tons (32.8 per cent), respectively, as compared with December, 1929. Cargo tonnage from South America with a decline of 156,414 tons (27.9 per cent) in comparison with December, 1929, showed the heaviest decrease in this direction, which was accounted for principally by the heavy decrease in the shipments of Chilean iron ore which normally makes up a large percentage of the cargo tonnage coming out of South America. A considerable decline was also noted in South America's proportion to the total tonnage in December, 1930. Cargo from the United States showed a decline of 18,597 tons, or a little over one per cent, while its proportion to the total tonnage was a little higher in December, 1930.

Destination.—Segregated according to destination, 50.5 per cent of the cargo tonnage moving from the Pacific to the Atlantic went to the United States, and 44.0 per cent to Europe. Tonnage to Europe increased 79,520 tons (12.6 per cent), in comparison with December, 1929, as did its proportion to the total cargo in this direction. That to the United States decreased in its relation to the total cargo and in actual tonnage of 166,454 tons (16.9 per cent). Increases in the shipment of wheat and fruit was largely responsible for the larger tonnage routed to Europe, while the decline of iron ore and mineral oil shipments accounted for the decline in tonnage to the United States.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify 86 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 14 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for December, 1929, or December, 1930, are listed in the following tabulation, showing differences:

Commodity.	December, 1929.	December, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	
Ammonia.....	11,016	8,555	-2,461
Asphalt.....	14,990	8,070	-6,920
Automobiles.....	16,877	11,528	-5,349
Cement.....	46,658	21,478	-25,180
Coal and coke.....	21,229	8,371	-12,858
Cotton.....	36,679	27,847	-8,832
Manufactured goods:			
Iron and steel.....	169,253	119,053	-50,200
Machinery.....	19,364	13,683	-5,681
Railroad material.....	23,569	8,177	-15,392
Tinplate.....	27,792	15,329	-12,463
Textiles.....	8,160	10,570	+2,410
Miscellaneous.....	13,463	11,673	-1,790
Metals, various ¹	21,001	6,255	-14,746
Oils, mineral.....	52,053	38,098	-13,955
Paper.....	19,713	21,308	+1,595
Patent fuel.....	11,354	.....	-11,354
Phosphates.....	23,670	7,470	-16,200
Sulphur.....	19,945	10,224	-9,721
Tobacco.....	12,764	12,841	+77

¹ Does not include scrap.

The above 19 commodity groups for December, 1930, comprise 65.3 per cent of the cargo moving from the Atlantic to the Pacific. With the exception of three slight increases, the items above listed showed decreases in comparison with December, 1929.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

From the cargo declarations submitted it was possible to classify over 98 per cent of the cargo moving from the Pacific to the Atlantic during the month of December, 1930. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1929 are listed below:

Commodity.	December, 1929.	December, 1930.	Difference.
	Long tons.	Long tons.	
Barley.....	19,820	17,578	-2,242
Beans.....	8,644	12,832	+4,188
Canned goods (fish, fruit, vegetables, etc.).....	76,169	72,698	-3,471
Coffee.....	8,027	11,101	+3,074
Cold storage (food products) *.....	23,608	24,886	+1,278
Flour.....	12,531	12,809	+278
Fruit, dried.....	22,026	31,612	+9,586
Fruit, fresh.....	16,701	40,761	+24,060
Lumber.....	232,449	280,728	+48,279
Metals, various.....	49,702	34,522	-15,180
Nitrates.....	174,574	197,437	+22,863
Oils, mineral.....	487,277	396,758	-90,519
Ores (principally iron).....	228,456	76,454	-152,002
Pulp.....	7,677	13,291	+5,614
Rice.....	3,739	19,135	+15,396
Sugar.....	72,202	40,995	-31,207
Wheat.....	109,364	196,297	+86,933

* Does not include fresh fruit.

The above 17 commodity groups for December, 1930, comprise 91.6 per cent of the cargo moving from the Pacific to the Atlantic. Eleven of the items showed increases over December, 1929, and 6 decreases. Food products, consisting of wheat, fruits, and rice, registered important increases, as did nitrates, while shipments of ores, mineral oil, metals and sugar declined rather heavily.

(Continued on next page.)

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 16, 1931.

No. 833.

Colombia, west coast, Buenaventura River, information concerning wreck declared erroneous. The Captain of the Port of Buenaventura, Colombia, has advised the Governor of The Panama Canal by letter that the information contained in Notice to Mariners No. 52, Washington, D. C., dated December 27, 1930, and subsequently Notice to Mariners No. 829, Balboa Heights, dated January 7, 1931, relative to the blowing up by dynamite of the wreck of the S. S. Tritonia is erroneous and that the wreck has not been molested since the S. S. Tritonia blew up and sunk in Buenaventura Harbor on February 28, 1929.

Approximate position of wreck: Latitude 3° 52' 30" N., longitude 77° 06' 00" W.

H. BURGESS, Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending January 17, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
San Mateo.....	United Fruit Co.....	January 10...	January 10...		314
S. A. Perkins.....	James Griffiths & Sons.....	January 12...	January 16...	3,901	
Suriname.....	United Fruit Co.....	January 12...	January 13...	160	
Sveve.....	Anglo-Saxon Petroleum Co.....	January 12...	January 14...	2,030	
Laurits Swenson.....	Fred Olsen & Co.....	January 12...	January 13...	2,386	
El Salvador.....	Panama Mail S. S. Co.....	January 13...	January 14...	18	8
Nosa Queen.....	N. O. & S. A. S. S. Co.....	January 14...	January 14...	24	
Ecuador.....	Panama Mail S. S. Co.....	January 14...	January 15...	25	2
Asuka Maru.....	Nippon Yusen Kaisha.....	January 15...	January 16...	186	
City of San Francisco.	Panama Mail S. S. Co.....	January 15...	January 15...		7

Origin and Destination of Cargo Passing Through the Panama Canal from the Atlantic to the Pacific, December, 1930.—Continued from page 351.
(Figures represent tons of 2,240 pounds.)

FROM—	NORTH AMERICA.										SOUTH AMERICA.					AUSTRALASIA.					ASIA.					Grand total.	Per cent of total cargo.
	West coast of United States.	West coast of Canada.	West coast of Central America.	Balboa, C. Z.	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Ecuador.	Pern.	West coast of South America.	Total, South America.	Australia.	New Zealand.	Australasia.	Total, Australasia.	Philippine Islands.	China.	Japan.	Far East.	Total, Asia.						
NORTH AMERICA:																											
UNITED STATES—																											
North Atlantic ports.....	159,719	305	8,058	826	6,700	174,864	7,723	705	574	2,539	2,327	13,868	8,110	4,222	12,341	14,446	15,217	13,053	12,684	84,780	255,823	46.4					
South Atlantic ports.....	6,181														2,008	280	736	1,272	1,296	3,574	11,763	2.1					
Gulf ports.....	83,234	478				38,712	3,229	84	224	258	36	3,831	4,448		4,448	285	5,341	10,007	16,258	37,861	84,582	16.4					
Total, United States.....	204,134	783	8,058	826	6,700	219,757	10,952	789	798	2,797	2,363	17,699	12,970	5,827	18,797	14,951	21,311	30,332	29,588	96,185	352,438	63.9					
East coast of Canada.....	4,628	7,350				11,978							3,070	3,561	6,631					500	7,941	8,441					
East coast of Central America.....	2,554		154			5,059	2,430	1,177	1,200	744	483	6,134	14,851		14,851							15,005	4.9				
Cristobal, C. Z.	147	64				211						4,511	20		4,531							12,083	2.2				
West Indies.....																						4,742	0.9				
Total, North America.....	211,463	8,197	11,617	826	6,700	238,639	13,382	1,958	6,599	3,561	2,846	28,354	30,891	9,368	40,279	14,951	21,814	38,273	29,588	104,626	411,318	74.6					
Europe:																											
British Isles.....	2,314	3,900				6,214	9,114	43	394	1,077	2,888	13,516			25,884							45,614	8.3				
Belgium.....	6,035	2,760	545	52		9,392	4,495	1,378	350	317	35	6,575			25,884							15,967	2.9				
Denmark.....	11	55				7																71	0.0				
France.....	2,451	4	18			2,473	1,229		14		1	1,251										3,724	0.7				
Germany.....	9,540	1,271	1,050	59		11,914	1,999	450	689	701	1,545	5,284										17,298	3.1				
Holland.....	1,896	258				2,154	1,045	51	87	95	1,410	9,388										4,742	0.9				
Italy.....	618	69	544			1,231	639		228		1,246	2,933										3,304	0.6				
Norway and Sweden.....	9,148		586	134		14,022			10		4,829	4,833										18,965	3.4				
Spain and Portugal.....	378	300				678						28										710	0.1				
Europe.....	1,445	262	681	386		3,161	2,375	512	51	374	3,179	6,491										9,652	1.7				
Total, Europe.....	33,836	9,465	6,379	1,630		51,310	21,803	2,431	1,571	2,816	14,229	42,853			25,884							120,047	21.7				
East coast of South America.....	15,049	3,612	32			18,693						940								714		714	0.1				
Grand total.....	290,348	21,274	18,028	1,712	6,700	308,082	55,185	5,940	1,170	6,377	17,075	72,147	30,891	35,272	66,103	14,951	21,814	38,937	29,588	105,340	551,712	100.0					
Per cent of total cargo:																											
December, 1930.....	47.2	3.8	3.3	0.3	1.2	55.8	6.3	1.0	1.5	1.2	3.1	13.1	5.6	6.4	12.0	2.7	3.9	7.1	5.4	19.1	100.0						
December, 1929.....	41.6	2.6	1.6	0.3	1.7	47.8	6.7	0.6	0.4	2.4	5.9	15.3	4.3	9.5	0.8	1.4	2.1	2.2	13.5	4.5	22.5	100.0					
December, 1928.....	40.1	3.7	3.3	0.5	0.5	48.1	4.6	1.2	0.5	2.4	3.9	12.6	5.8	3.4	0.6	1.8	2.6	4.5	12.9	4.3	24.5	100.0					

* General cargo not routed so as to allow segregation between definite ports. * Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, December, 1930.
(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										EUROPE.										Grand total.	Per cent of total cargo.		
	UNITED STATES.					OTHER COUNTRIES.					EUROPE.					OTHER COUNTRIES.								
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.	East coast of Cen- tral America.	Cristobal, C. Z.*	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Durope. ¹	Total, Durope.			East coast of South America.	Africa.
NORTH AMERICA:																								
West coast of United States.	562,344	6,208,222	848,591	400,841	2,502	1,865	7,174,602	941,148,722	3,493,1724	7,074,31,940	10,8897,613	704	38,537,245,701	3,812	264	852,718								
West coast of Canada.	40,841						1,616	44,532	95,864	1,520,2,704	1,001,10,329	290	40	80,976	192,724	2,434								
W. coast of Central America.	134						3,354	129	3,855	126	2,003	14	2	6	2,151	428								
Bahoa, C. Z.				90			120		210															
Total, North America.	603,319	6,208,222	938,632	465	2,067	2,540	5,547	8,919,651	538,239,586	5,018,4,428	8,201,44,272	11,1637,655	704	38,537,245,701	3,812	264	119,519,440	576,674	264	1,099,052	68,0			
SOUTH AMERICA:																								
Chile.	56,073	18,640	13,203	87,916	1,024	50	50	975	89,965	11,877	7,295	433	2,855	3,267	375	500	116	153,087	179,805	160	269,930	16,7		
Colombian.	1,911			1,911			2,511		4,422															
Ecuador.	7,262			7,262			2,198	12	9,472															
Peru.	29,873			29,873			38	33	67,184	16,951	4,679	252	7,219	3,958	1,680	2,649		11,236	48,624		115,808	7,2		
W. coast of South America.	19			19			1,038		1,057	2,974	310				41			198	3,522		4,580	0,3		
Total, South America.	95,138	18,640	13,203	126,981	37,240	1,024	5,835	1,020,172,100	31,802	12,284	685	10,074	7,266	2,055	500	2,765	164,521	231,952	160	404,212	25,1			
AUSTRALASIA:																								
Australia.	14,854			14,854					14,854															
New Zealand.	1,206			1,206			34		1,340	30,550														
Australasia.	7,600			7,600					7,600															
Total, Australasia.	23,660			23,660	100		34		23,794	30,550														
ASIA:																								
Philippine Islands.	16,088			16,088					19,788															
China.	4,744			4,744			920	123	5,787															
Japan.	4,455			4,455			326		6,653															
Far East.	1,955			1,955			37	15,914	17,906															
Total, Asia.	27,242	1,019	4,533	32,814			1,283	16,037	50,134															
Grand total.	749,359	25,867	40,694	815,320	39,407	3,564	12,699	25,976	897,566	301,938	17,302	5,113	18,275	51,538	13,248	8,155	3,469	291,470	710,508	6,834	264	1,615,172	100,0	
Per cent of total cargo:																								
December, 1930.	46.4	1.6	2.5	50.5	2.5	0.2	0.8	1.6	55.6	18.7	1.1	0.3	1.1	3.2	0.8	0.5	0.2	18.1	44.0	0.4	0.4	100.0		
December, 1929.	53.9	2.2	2.4	58.5	1.9	0.2	0.7	0.9	62.0	14.0	1.0	0.3	2.8	1.8	0.8	0.2	1.0	15.0	37.6	0.4	0.4	100.0		
December, 1928.	39.4	3.3	4.1	46.8	1.1	0.5	1.6	1.1	31.1	13.5	2.0	0.2	1.5	4.2	3.1	1.6	0.3	13.2	48.4	0.2	0.3	100.0		

* General cargo not routed so as to allow segregation between definite ports. ¹ Includes both local and transit cargo.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, January 17, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Wido	10	13.30	11	5.20	11	14.05	11	15.25	German	North German Lloyd.	393.5	53.1	21.6	Hamburg, Germany	Valparaiso, Chile.	General	3,843	6,585	4,631
Moerdijk	10	13.30	11	5.20	11	14.05	11	15.25	Dutch	Holland-America Line.	472.9	60.1	20.3	Rotterdam, Holland	Vancouver, B. C.	General	2,740	9,165	7,056
City of Pitsburg	11	6.25	11	6.40	11	14.48	11	16.00	British	Ellerman & Bucknall.	465.7	58.6	20.0	Norfolk, Va., N. F.	Brisbane, Australia	General	2,216	9,660	7,415
Lochkatrine	10	15.25	11	7.40	11	20.53	11	21.32	British	Canadian Transp. Co.	400.0	53.2	18.0	Cornbrook, N. F.	Tacoma, Wash.	Paper	2,500	5,615	3,757
Alaskan	11	14.10	11	14.20	11	21.53	11	22.53	British	Royal Mail S. P. Co.	485.0	62.0	22.11	Rotterdam, Holland	Portland, Oreg.	General, bananas	2,890	10,802	7,595
Echo	11	14.10	11	14.20	11	21.53	11	22.53	Panamanian	Amer.-Hawaiian Line.	415.0	53.7	14.6	Boston, Mass.	Portland, Oreg.	General	1,610	7,350	5,339
Royal Arrow	11	20.30	12	00.05	12	10.10	12	11.32	American	H. W. Post.	467.6	62.7	27.3	Cristobal, C. Z.	Balboa, C. Z.	Ballast	11,926	9,699	6,857
Laurits	11	13.50	12	5.25	12	12.27	14	5.57	Norwegian	Standard Transp. Co.	435.0	56.0	22.0	Beaumont, Tex.	Shanghai, China.	Kerosene	4,605	7,963	5,837
Buenos Aires	12	6.05	12	7.55	12	15.01	12	16.34	Japanese	Fred Olsen & Co.	461.0	62.0	24.0	Oslo, Norway	Vancouver, B. C.	General	3,854	10,446	7,631
Manu	12	8.15	12	8.25	12	16.28	12	18.05	American	Osaka Shosen Kaisha.	400.7	54.2	19.0	Buenos Aires, Arg.	Kobe, Japan.	General, cotton	3,718	6,623	4,668
S-14	12	8.20	12	8.20	12	16.42	12	18.42	American	Munson, McCork Line.	231.0	21.10	..	Baltimore, Md.	Tacoma, Wash.	Ballast	..	..	..
Patrick Henry	12	9.10	12	9.25	12	17.43	12	18.46	American	U. S. Navy.	439.6	60.0	21.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast	..	..	..
Hanley	12	9.35	12	9.45	12	18.57	13	00.20	American	Tampa Inter-ocean Co.	440.0	56.0	24.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast	..	..	..
Buffalo Bridge	12	10.20	12	10.45	12	19.30	12	21.20	American	Norton, Lilly & Co.	324.0	46.2	16.0	New Orleans, La.	Manila, P. I.	Cotton, general	5,446	8,987	6,612
Elizabeth	12	12.30	12	12.40	12	20.48	12	22.10	American	Nelson Line.	391.9	51.2	20.6	Baltimore, Md.	Seattle, Wash.	General	5,356	8,310	6,005
Kallogg	12	18.00	13	2.35	13	11.16	13	13.10	Swedish	Richfeld Oil Co.	888.8	52.3	18.0	New York, N. Y.	Tacoma, Wash.	General	1,466	3,985	2,630
Atland	13	4.15	13	6.05	13	13.32	13	14.40	Japanese	Axel Brostrom & Son.	445.0	58.0	18.0	New York, N. Y.	Los Angeles, Calif.	Ballast	..	..	..
Toba Maru	13	4.15	13	6.05	13	13.32	13	14.40	Japanese	Nippon Yusen Kaisha.	445.0	58.0	18.0	Cardiff, England.	Arica, Chile	General	2,436	8,058	5,743
Uftington	13	8.15	13	8.25	13	15.55	13	16.50	British	Haldin & Phillips.	405.6	55.6	14.11	Baltimore, Md.	Kobe, Japan.	General	..	..	..
Court	13	18.50	13	9.10	13	16.46	14	15.00	American	Panama Mail S. S. Co.	360.0	51.6	21.0	New York, N. Y.	Sydney, Australia.	Ballast	1,972	5,710	4,811
El Salvador	13	4.35	13	11.10	13	18.26	13	19.23	French	Amer-Hawaiian Line.	472.1	59.7	23.0	New York, N. Y.	San Francisco, Cal.	General	1,826	10,589	7,513
Winnipeg	13	20.15	14	1.40	14	9.53	14	11.10	American	French Line.	434.3	57.7	17.0	Hayre, France.	Vancouver, B. C.	General	1,527	7,983	5,912
Georgan	13	4.10	14	5.00	14	14.23	14	15.30	Swedish	Ore S. S. Corp.	561.0	72.2	26.0	Boston, Mass.	Seattle, Wash.	General	..	..	..
Svealand	14	4.10	14	6.15	14	14.08	14	15.08	American	U. S. Navy.	380.0	64.0	23.0	Sparrows Pt., Md.	Cruz Grande, Chile	Ballast	..	..	..
Rochester	13	15.50	14	6.15	14	14.08	14	15.08	American	U. S. Navy.	380.0	64.0	23.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast	..	..	..
K. I.	14	7.00	14	7.40	14	15.23	14	16.40	American	Luckenbach Line.	446.0	56.0	20.0	Boston, Mass.	Seattle, Wash.	General	2,553	8,552	6,236
Nevada	14	3.10	14	9.05	14	16.30	14	17.55	American	The Texas Co.	434.8	56.0	23.0	Providence, R. I.	Los Angeles, Calif.	Ballast	..	..	..
San Vicente	14	8.10	14	9.45	14	17.20	14	18.38	American	States S. Co.	410.5	54.3	18.7	Philadelphia, Pa.	Seattle, Wash.	General	3,291	6,572	4,900
Grelson	12	4.20	14	14.10	14	23.06	14	22.55	British	Darwin Ship Co.	379.0	46.1	16.0	Norfolk, Va.	Antofagasta, Chile	Ballast	..	..	..
Nosa Queen	12	17.25	14	14.30	14	22.06	15	4.00	American	N. O. & S. A. S. Co.	324.0	46.2	18.1	New Orleans, La.	Valparaiso, Chile.	General	1,879	5,361	3,939
Willapa	12	14.50	15	1.05	15	11.46	15	10.50	American	Gulf-Hawaiian Line.	415.0	55.7	18.0	Norfolk, Va.	Seattle, Wash.	General	1,902	7,781	5,805
Abron	14	18.35	15	2.45	15	11.02	15	12.30	American	Amer-Pacific Line.	381.0	52.2	21.0	Houston, Tex.	Seattle, Wash.	General	6,059	5,732	4,131

¹ Tanker. ² Motor ship. ³ Motor sloop. ⁴ Submarine. ⁵ Cruiser.

Pomona.....	14	23.00	15	4.30	15	12.14	15	13.30	American.....	440.0	56.0	17.0	Baltimore, Md.	Ballast.....	8,324	6,039
Eric Frisell.....	14	18.30	15	5.45	15	13.42	15	16.30	Swedish.....	392.0	53.0	17.6	Arica, Chile	Ballast.....	5,769	4,084
Pamho Maru.....	14	23.00	15	8.35	15	14.16	15	16.15	Japanese.....	425.0	53.0	24.0	New York, N. Y.	Cotton, steel.....	6,094	5,139
Coptic.....	14	17.50	15	7.15	15	15.10	15	16.15	British.....	482.6	64.2	20.7	New Zealand.....	Ballast.....	11,819	8,356
Canadafolite.....	15	9.40	15	12.25	15	21.02	15	22.25	British.....	510.9	68.2	22.0	Talara, Peru.....	Ballast.....	11,556	6,772
Gauca.....	14	18.50	15	12.30	15	21.55	16	1.56	Colombian.....	107.0	22.0	8.6	Buenaventura, C.	General.....	75	262
Oakland.....	14	16.40	15	13.50	15	21.40	16	00.10	German.....	433.0	59.0	22.1	Hamburg, Germany	Gen., bananas.....	4,910	8,510
City of San Francisco.....	9	2.10	15	14.37	15	23.18	16	4.46	American.....	296.0	46.0	18.0	San Francisco, Cal.	General.....	1,010	3,848
Kimi.....	15	2.45	15	14.20	15	23.02	15	24.00	American.....	229.0	39.0	11.0	Wellington, N. Z.	Ballast.....	1,616	824
Sun.....	15	11.50	16	1.45	16	9.59	16	11.06	American.....	430.6	66.8	21.8	Los Angeles, Calif.	Ballast.....	9,620	6,476
Gragness.....	15	12.35	16	3.05	16	11.27	16	12.35	British.....	411.0	65.0	13.6	Vancouver, B. C.	Ballast.....	7,022	5,250
Sarname.....	13	16.00	16	4.50	16	13.07	17	15.00	American.....	337.0	41.0	17.3	San Francisco, Cal.	Ballast.....	3,667	2,329
St. Mihiel.....	15	13.00	16	6.05	16	13.54	16	15.00	American.....	436.0	58.0	24.0	Brooklyn, N. Y.	General.....	348	
Nordic.....	15	13.00	16	6.35	16	15.03	16	16.20	Swedish.....	335.0	53.9	14.0	Camden, N. J.	Ballast.....	5,457	3,878
La Paz.....	15	15.40	16	7.30	16	15.48	16	21.38	British.....	405.0	54.0	24.4	Valparaiso, Chile	General.....	7,033	4,912
Pacific.....	16	2.35	16	9.40	16	17.08	16	18.10	British.....	450.4	60.8	19.5	Portland, Oreg.	General.....	925	10,086
Acoguess.....	16	4.35	16	10.05	16	17.56	16	19.00	Chilean.....	422.8	56.2	25.6	Valparaiso, Chile	General.....	1,858	7,764
Lubrats Kellogg.....	16	12.10	16	14.10	16	21.35	16	23.05	American.....	390.0	54.2	16.0	Los Angeles, Calif.	Ballast.....	6,209	4,303
Dorabof.....	17	09.05	17	3.05	17	10.58	17	12.30	Belgian.....	440.0	57.0	21.0	Antwerp, Belgium	Ballast.....	7,615	4,976
Mataros.....	16	12.30	17	4.15	17	12.12	17	13.05	British.....	500.0	63.0	23.9	Auckland, N. Z.	General.....	4,000	13,590
Helen.....	17	2.30	17	6.15	17	14.33	17	15.40	American.....	409.6	54.2	16.0	Baltimore, Md.	General.....	2,215	6,667
Whittier.....	15	9.00	17	6.15	17	14.49	17	15.40	American.....	77.7	22.2	...	Pearl Islands, R. P.	Ballast.....	98	55
White Shadow.....	16	14.30	17	8.50	17	15.42	17	19.24	American.....	360.0	51.7	23.3	Valparaiso, Chile	General.....	2,321	5,957
Santa Elisa.....	16	6.30	17	11.20	17	17.51	18	3.13	British.....	472.0	67.0	24.0	Avonmouth, Eng.	General.....	4,008	
Oakto.....	17	6.30	17	11.20	17	17.51	18	3.13	British.....	472.0	67.0	24.0	Avonmouth, Eng.	General.....	4,008	

6 Transport, 7 Yacht.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Marie Maersk.....	10	16.50	11	6.29	11	15.15	11	17.00	Danish.....	466.3	61.8	27.2	Los Angeles, Calif.	Gasoline.....	11,667	8,645
Biscan.....	11	6.00	11	7.33	11	19.20	11	19.20	Norwegian.....	395.2	55.1	26.0	Lands End, Eng.	Benzine.....	8,341	4,376
Washington.....	11	8.00	11	6.58	11	18.45	12	17.40	French.....	493.9	61.2	27.0	Le Havre, France	General.....	8,513	10,332
Bauca.....	10	21.58	11	7.52	11	18.50	11	18.50	Colombian.....	107.2	22.9	10.0	Cristobal, C. Z.	Coffee, rubber.....	105	262
Bonington.....	10	22.30	11	7.58	11	20.20	11	20.20	British.....	405.5	55.5	25.0	Vancouver, B. C.	Lumber, general.....	8,340	7,042
Courts.....	11	17.50	12	17.20	12	18.15	12	18.15	Venezuelan.....	325.0	55.0	12.0	Balboa, C. Z.	Ballast.....	3,464	2,068
Peole Bueno.....	11	16.55	12	6.43	12	18.10	12	18.10	American.....	416.8	56.1	26.0	New York, N. Y.	Gasoline.....	8,388	6,756
Pennsylvania.....	11	24.00	12	6.57	12	17.40	12	19.25	Norwegian.....	270.1	38.1	16.4	Azores.....	Nitrate of soda.....	2,300	1,910
Thyra.....	12	6.50	12	7.38	12	19.35	12	21.30	German.....	412.6	53.1	25.0	Los Angeles, Calif.	Gasoline.....	7,923	6,005
Mitcheimer.....	12	8.10	12	9.20	12	20.00	12	20.00	American.....	380.4	53.1	25.0	Lands End, Eng.	Lumber.....	4,704	5,659
Charles Nelson.....	12	8.10	12	9.20	12	20.00	12	20.00	American.....	380.4	53.1	25.0	Aberdeen, Wash.	Lumber.....	4,704	5,659
J. L.....	12	17.40	12	20.12	13	4.10	13	4.10	American.....	448.9	60.2	29.0	Portland, Oreg.	General.....	8,000	9,294
Lukenbaech.....	13	6.18	13	16.50	14	6.15	15	6.15	American.....	384.0	64.9	26.0	Balboa, C. Z.	Cruiser.....	485	3,667
Rochester.....	12	11.00	13	6.42	13	16.00	13	16.00	American.....	336.7	41.9	20.0	Cristobal, C. Z.	Coffee, general.....	485	3,667
California.....	12	21.05	13	7.15	13	17.20	14	00.25	American.....	513.5	68.2	30.0	Los Angeles, Calif.	Gasoline.....	15,365	11,719
Standard.....	13	1.30	13	7.27	13	18.00	13	18.00	American.....	414.5	53.7	28.2	Portland, Oreg.	General.....	6,193	7,049
Kentuckian.....	13	3.20	13	8.16	13	19.15	13	19.15	American.....	410.5	54.0	25.0	Seattle, Wash.	General.....	7,545	6,024
Pacific Spruce.....	13	3.20	13	8.16	13	19.15	13	19.15	American.....	410.5	54.0	25.0	Norfolk, Va.	General.....	7,545	6,024

* Motor ship. * Tanker. * For orders.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Almeo	13	5:00	13	9:54	13	20:30	13	21:00	Dutch	Royal Neth. S. S. Co.	447.9	62.7	26.0	Valparaiso, Chile.	Hamburg, Germany	Nitrates, general.	9,371	9,656	6,849
Point Bonita	13	5:30	13	9:21	13	21:00	13	21:00	American	Gulf-Pacfic Line, Ltd.	324.0	46.2	22.0	N. Vancouver, B. C.	New Orleans, La.	(*)	3,549	3,984	2,617
Port Hunter	13	11:25	13	12:02	13	21:50	13	21:50	British	Leuchter & Co.	481.2	62.3	26.0	N. Plymouth, N. Z.	London, England	Frozen, general.	6,660	11,170	8,208
Shipor	13	13:50	13	14:29	13	23:55	14	2:05	British	Furness, Withy & Co.	420.0	58.0	27.0	Vancouver, B. C.	Glasgow, Scotland	General.	7,957	7,892	5,858
Tongararo	13	14:25	13	14:54	14	00:15	14	3:10	British	N. Z. Shipping Co.	478.7	62.7	24.3	Bluff, N. Z.	London, England	Frozen, general.	7,274	10,817	7,562
Andromeda	13	18:00	13	18:56	14	4:30	14	13:10	French	Messageries Maritimes	490.3	59.9	24.0	Noumea, N. Caled.	Marseilles, France	General.	7,100	7,984	5,472
Steve	19	20:30	14	6:15	14	13:55	14	13:55	orwegian	Anglo-Saxon Pet. Co.	420.0	57.2	25.0	Los Angeles, Calif.	Guaraco, W. I.	Gasoline.	6,641	6,819	4,427
St. Doheny	13	23:30	14	6:22	14	15:10	14	15:10	American	Richfield Oil Co., Calif.	491.2	59.2	25.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline.	9,186	6,819	4,427
Steel Inventor	14	1:53	14	7:11	14	16:15	14	21:15	American	Islandian S. S. Co.	491.2	56.2	27.0	Vancouver, B. C.	Avonmouth, Eng.	(*)	7,851	7,611	5,450
San Gabriel	14	9:30	14	10:20	14	19:00	14	19:00	American	Pacific-Alumina S. Co.	381.0	52.3	25.0	Seattle, Wash.	Baltimore, Md.	(*)	6,850	5,719	4,023
Lema	14	0:03	14	11:04	14	20:53	15	1:00	Italian	Nap. Bera-Frestins.	590.0	57.0	27.2	Vancouver, B. C.	Trieste, Italy	General.	9,102	8,805	6,497
Ospida	14	6:30	14	12:35	14	21:00	14	21:00	American	Port Motor Co.	271.0	43.6	20.3	Long Beach, Calif.	Chester, Pa.	Lumber, auto plus	2,543	2,636	1,621
Westmoreland	14	10:20	14	14:08	14	22:05	14	22:05	British	Federal Steam Nav. Co.	385.0	60.1	25.1	Wanganui, N. Z.	Glasgow, Scotland	Frozen, general.	5,578	10,423	7,456
Movoria	14	9:45	14	14:51	14	23:30	14	23:30	British	Donald Bros., Ltd.	385.0	51.6	27.3	Vancouver, B. C.	Glasgow, Scotland	General.	5,680	6,576	4,724
San Anselmo	14	15:30	14	16:20	15	2:45	15	2:45	American	Quaker Line	310.5	54.2	23.0	Portland, Ore.	Camden, N. J.	Lumber, general.	7,232	6,765	4,857
Ecuador	14	11:20	15	6:27	15	14:55	15	3:30	American	Panama Mail S. S. Co.	380.6	45.7	23.0	San Francisco, Cal.	New York, N. Y.	Coffee, general.	3,285	5,926	4,178
Trontolite	14	18:20	15	6:58	15	19:30	15	19:30	British	Bremer Hansen Ak bet.	419.4	57.2	30.0	Talara, Peru	Vallo, Norway	Crude oil.	10,000	7,226	4,413
Constance	15	2:00	15	8:11	15	20:15	15	20:15	American	Arrow Line	409.6	54.2	24.4	Portland, Ore.	New York, N. Y.	Lumber.	7,269	6,621	4,891
Lightburne	14	20:45	15	8:37	15	21:20	15	21:20	American	The Texas Co.	416.8	56.1	27.0	Los Angeles, Calif.	Wilmington, N. C.	Gasoline.	8,946	6,981	4,963
Harcourt	15	9:30	15	10:16	15	22:10	15	22:10	American	Refined Oil Co., Calif.	434.8	56.2	27.0	Los Angeles, Calif.	Leves, Delaware	Gasoline.	9,504	7,394	5,069
Capra	15	11:25	15	11:36	16	00:10	16	00:10	Italian	Nav. Gen. Italiana	292.9	56.0	21.0	Valparaiso, Chile	Genoa, Italy	General.	2,014	5,444	6,008
Barak	15	13:25	15	14:08	16	00:15	16	00:15	Dutch	Royal Neth. S. S. Co.	292.9	53.1	24.4	Buenaventura, Col.	Christobal, C. Z.	Coffee, general.	845	1,182	732
Taoma	15	15:30	15	16:10	16	3:30	16	21:30	German	Haugv-Amerikan Line	277.5	63.1	27.0	Vancouver, B. C.	Hamburg, Germany	General.	7,964	10,277	7,304
S-12	15	15:30	15	16:48	16	1:25	16	1:25	American	U. S. Navy	271.0	20.0	0.0	Balboa, C. Z.	Christobal, C. Z.	Ballast.	12,223	9,625	6,869
Langager	15	17:20	16	9:18	16	15:00	16	16:50	Norwegian	Anglo-Saxon, Pet. Co.	373.0	64.5	27.0	Los Angeles, Calif.	Sancti Spid, Eng.	Benzine.	3,082	3,284	2,617
Point Fermis	15	19:34	16	7:03	16	13:10	16	15:30	American	Gulf-Pacfic Line	353.0	46.2	22.0	Seattle, Wash.	New Orleans, La.	General.	13,070	9,272	6,612
Brilliant	15	22:30	16	7:14	16	13:30	16	18:30	American	Standard Transp. Co.	480.3	65.0	24.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	3,581	5,473	5,294
Arzua Maru	15	22:30	16	8:28	16	18:15	16	20:45	Japanese	Osaka Steamship Co.	419.0	55.5	24.0	Shanghai, China	New York, N. Y.	Beans, general.	3,581	5,473	5,294
Caldas	16	6:00	16	8:20	16	13:35	16	20:45	Colombian	Northern Navigation Co.	116.0	21.1	10.0	Buenaventura, Col.	Christobal, C. Z.	Coffee	4,397	4,711	3,363
Alda	16	1:45	16	9:03	16	20:45	18	2:05	German	Northern Navigation Co., Ltd.	425.0	56.0	25.0	Vancouver, B. C.	Antwerp, Belgium	General.	4,492	6,813	4,868
Capa Horn	16	4:00	16	9:25	16	22:00	16	22:00	British	Lytle Shipping Co.	419.0	57.0	26.0	Manila, P. I.	London, England	Wheat, lumber.	6,800	8,193	5,702
Salyador	16	13:55	16	14:25	16	23:30	17	1:17	Japanese	Nippon Yusen Kaisha.	245.0	33.5	18.0	San Jose, Spat.	Christobal, C. Z.	Coffee, general.	9,581	9,927	6,920
Californian	16	14:15	16	15:13	17	2:25	17	1:25	British	Amer. S. S. Line	433.3	57.0	27.0	Seattle, Wash.	Boston, Mass.	General.	8,514	9,683	6,863
Dryden	16	14:45	16	16:30	17	2:55	17	3:40	American	Tampa Hawaiian Line	433.3	57.0	27.0	Hongkong, China.	New Orleans, La.	General.	8,514	9,683	6,863
Perigo	16	19:15	16	19:54	17	4:55	17	4:55	German	Hamburg-Amerikan Line	227.2	34.4	14.0	Guayaquil, Ecuador	Christobal, C. Z.	(*)	527	1,572	1,011

(*) Lumber, copper, and general.

(*) Grain, canned goods, and spelter.

(*) Sugar, oil, tea, and general.

(*) Copra, coconut oil, and matting.

(*) Motor ship.

(*) Submarine.

(*) Lumber, wheat, and general.

(*) Cacao, coco, and hides.

(*) Cotton, oil, and matting.

(*) Motor ship.

(*) Submarine.

(*) Lumber, wheat, and general.

(*) Cacao, coco, and hides.

(*) Cotton, oil, and matting.

(*) Motor ship.

(*) Submarine.

(*) Lumber, wheat, and general.

(*) Cacao, coco, and hides.

(*) Cotton, oil, and matting.

(*) Motor ship.

(*) Submarine.

Broad Arrow 1	17	3.45	17	6.47	17	15.35	17	15.35	American.	General Petroleum Co.	457.5	62.7	27.4	Los Angeles, Calif	New York, N. Y.	11,779	9,700	6,804
Araucan	17	7.15	17	8.07	17	16.45	17	19.45	British.	Pacific Steam Nav. Co.	303.4	43.0	19.0	Tocopilla, Chile	New York, N. Y.	2,513	2,851	1,776
Santa Cecilia	17	8.00	17	9.05	17	17.20	17	20.15	American.	Argonaut S. S. Co.	404.6	53.9	25.0	Everett, Wash.	Portsmouth, R. I.	6,150	6,745	4,502
S-17 1 ¹	17	9.13	17	9.13	17	17.20	18	10.35	American.	U. S. Navy.	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.			
Somme 1 ⁹	16	14.35	17	15.03	17	22.25	18	11.00	American.	U. S. Army.	445.0	58.0	25.0	San Francisco, Cal.	General			
Major-Pullen 2 ⁰	12	7.05	12	7.05	12				American.	U. S. Army.				Balboa, C. Z.	Gatun Lake, C. Z.	90		

1 Tanker. 19 Transport. 20 Launch. 21 Copper, ore, and coffee.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
January 10	Waunta	Standard Fruit & S. S. Co.	Puerto Cabezas, Nicaragua	January 11	Swiftwind	Shell Eastern Petroleum Co.	Curacao, D. W. I.
January 11	Sotia	United Fruit Co.	Bocas, Rep. of Panama.	January 11	Bogota	Colombian S. S. Line.	New York via wayports.
January 11	Rugia	Hamburg-American Line	Hamburg via wayports.	January 11	Sosua	United Fruit Co.	Mobils, Ala.
January 12	Darien C-35 2 ¹	Standard Fruit & S. S. Co.	Barranquilla and waypts.	January 11	Heredia	United Fruit Co.	New Orleans and waypts.
January 12	No. 9685 2 ¹	Pan American Airways	San Salvador and waypts.	January 12	Anachucuna 2 ¹	United Fruit Co.	Colon, Rep. of Panama.
January 13	Juan Sebastian Elcano	Spanish S. S. Line	Barcelona via wayports.	January 12	Rugia	Hamburg-American Line	Tampico via wayports.
January 13	No. 306-N 2 ¹	Pan American-Graace Airways	Talara via wayports.	January 12	Waunta	Standard Fruit & S. S. Co.	La Ceiba.
January 14	Cristobal	Panama R. R. S. S. Line	New York via Haiti.	January 14	No. 9684 2 ¹	Pan American Airways	San Salvador and waypts.
January 14	Uta	United Fruit Co.	New York via wayports.	January 14	Inapaquina 2 ¹	Elders & Fyffes Line	Avonmouth via wayports.
January 14	Reliance	Hamburg-American Line	New York via Habana.	January 15	No. 145-M 2 ¹	Pan American Airways	Colon, Rep. of Panama.
January 14	Arguani	Elders & Fyffes Line	Avonmouth via waypts.	January 15	Uta	United Fruit Co.	La Guayra and waypts.
January 14	Svaola	United Fruit Co.	Avonmouth via Kingston.	January 15	Skaola	Hamburg-American Line	New York via wayports.
January 14	Tels	United Fruit Co.	New Orleans, La.	January 15	Reliance	United Fruit Co.	Port Limon, Costa Rica.
January 14	Swiftsout	Asiatic Petroleum Co.	Curacao, D. W. I.	January 15	Uta	United Fruit Co.	Bocas, Rep. of Panama.
January 14	No. 9570 2 ¹	Pan American Airways	San Salvador and waypts.	January 15	Tela	Asiatic Petroleum Co.	Curacao, D. W. I.
January 14	No. 668-M 2 ¹	Pan American Airways	Miami via wayports.	January 15	Swiftsout	Asiatic Petroleum Co.	Barcelona and wayports.
January 14	Inapaquina 2 ¹	Holland-America Line	Colon, Rep. of Panama.	January 16	Juan Sebastian Elcano	Spanish S. S. Line.	New York via wayports.
January 15	Stendand	Compania Mex. de Aviacion	New York via wayports.	January 16	Stendand	Holland-America Line	New Orleans and waypts.
January 15	F-7-A-B-C-L 2 ¹	Standard Fruit & S. S. Co.	San Salvador and waypts.	January 16	No. 9685 2 ¹	Pan American Airways	San Salvador and waypts.
January 16	Marinique	Colombian S. S. Line	New Orleans and Habana.	January 16	Darien C-35 2 ¹	Standard Fruit & S. S. Co.	Barranquilla and waypts.
January 16	Travemunde	Colombian S. S. Line	New York via wayports.	January 17	Dora K. 2 ⁴	A. L. Surgeon.	Bluefields and Port Limon.
January 16	Tels	Lubeck S. S. Co.	Houston via wayports.	January 17	Travemunde	Lubeck S. S. Co.	Paramaribo via wayports.
January 17	Republ.	United States Lines	Bocas, Rep. of Panama.	January 17	Tela	United Fruit Co.	New Orleans and waypts.
January 17	Carintha	United Fruit Co.	Philadelphia and wayports	January 17	Amapala	Standard Fruit & S. S. Co.	New Orleans and waypts.
January 17	Parisma	Cunard S. S. Line	New York via wayports.	January 17	Marinique	Standard Fruit & S. S. Co.	New Orleans and waypts.
January 17	August Thyssen	Aluminium Line	New Orleans and waypts.	January 17		Colombian S. S. Line	New York via wayports.
January 17	Dora K. 2 ⁴	A. L. Surgeon	Colon, Rep. of Panama.				
January 17	No. 9664 2 ¹	Pan American Airways	San Salvador and waypts.				
January 17	No. 669-M 2 ¹	Pan American Airways	Miami via wayports.				
January 17	No. 145-M 2 ¹	Pan American Airways	La Guayra via wayports.				
January 17	No. 945-M 2 ¹	Pan American-Graace Airways	Talara via wayports.				

* ARRIVALS.

* DEPARTURES.

22 Air mail carrier. 23 Motor boat. 24 Motor ship.

* Other than ships passing through the Canal.

(Continued on page 360, column 2.)

Hydrographic Notes for the Calendar Year 1930.

The following summary of water supply and consumption for Canal uses during the past calendar year has been furnished by the Chief of Surveys:

Chagres River: The discharge of the Chagres River at Alhajuela for the calendar year 1930 was 23 per cent below the 29-year average, or 61.4 billion cubic feet as compared with an average of 80.0 billion cubic feet. It was not the lowest discharge of record but approximated a number of other low year discharges, a list of which are given below:

Year.	Bill. cu. ft.	Year.	Bill. cu. ft.	Year.	Bill. cu. ft.
1895.....	67.2	1901.....	62.6	1920.....	65.9
1896.....	66.3	1905.....	47.9	1921.....	69.7
1897.....	69.5	1911.....	70.0	1925.....	61.3
1899.....	65.0	1912.....	67.4	1926.....	59.2
1900.....	58.3	1919.....	59.8	1929.....	64.9

NOTE.—The 29-year average period considered is from 1902 to 1930, inclusive. Records previous to 1902 are somewhat questionable.

The maximum and minimum yearly discharges of record are 153.8 billion cubic feet in 1909, and 47.9 billion cubic feet in 1905.

The maximum monthly discharge during the current year was 9.1 billion cubic feet in November, and the minimum 1.3 billion cubic feet in February.

The maximum momentary discharge was 33,540 cubic feet per second at elevation 105.06 feet on November 29th, and the minimum momentary discharge, 352 cubic feet per second at elevation 91.28 feet on April 7th and 8th.

Gatun Lake watershed: The net yield of the Gatun Lake watershed for the calendar year 1930 was 33 per cent below the 17-year average, or 118.7 billion cubic feet as compared with an average of 177.4 billion cubic feet. It is the lowest on record since the formation of Gatun Lake and follows the year 1929 with a net yield of 141.5 billion cubic feet, which was the lowest yearly yield over the period since the formation of Gatun Lake until superseded by the year just past. Hydrographic records of what is now the Gatun Lake watershed area extend back to 1890 although the yield over the period before the formation of the lake is not strictly comparable with the yield since its formation, nor are the older records based on as accurate data. They indicate, however, a dry year in 1905 and a dry cycle during the years 1899 and 1900. The year 1905 over what is now the Gatun Lake watershed was as dry or probably drier than the year just past but the years preceding and following 1905 furnished approximate normal yields, so that from a water supply standpoint the 1905 cycle can be disregarded. The years 1899 and 1900 are the nearest approach to the dry cycle of 1929 and 1930. The yields for these years were probably around 135 and 145 billion cubic feet, respectively. There is little doubt that the dry cycle 1929-1930, is the driest on record for the 41-year period 1890 to 1930, inclusive, and incomplete French records of the 1880's indicate that it probably is the driest cycle over the Gatun Lake watershed since hydrographic studies were begun; a period of approximately 50 years.

The maximum monthly total yield for the calendar year 1930 was 21.7 billion cubic feet in November, and the minimum minus 0.9 billion cubic feet in March (*i. e.*, more water evaporated than came into the lake as runoff). The total yield of the lake's watershed for the year amounted to 140.108 billion cubic feet (0.73 of the capacity of the lake), accounted for as follows:

	Percent.	Bill. cu. ft.
Runoff above Alhajuela.....	43.8	61.360
Yield from the land area below Alhajuela.....	33.7	47.150
Direct rainfall on the lake surface.....	22.5	31.598
Total.....	100.0	140.108

The items of disposition of this water were:

	Percent.	Bill. cu. ft.
Evaporation from lake surface.....	15.3	21.402
Gatun Lake lockages.....	27.6	38.751
Hydroelectric power.....	32.5	45.513
Spillway waste.....	23.2	32.470
Leakage and municipal water.....	1.2	1.653
Increase in storage.....	.2	.319
Total.....	100.0	140.108

Canal lockages (mean of Gatun and Pedro Miguel) averaged 16.5 per day during the year and required 6.424 million cubic feet of water per lockage. At this rate of water consumption per lockage the water wasted over Gatun Spillway was equivalent to 14 lockages per day, and the water used for power at Gatun was equivalent to 19.5 lockages per day. In other words if no water had been wasted and none used for power, the yield this year would have furnished water for 50 lockages per day. With a third flight of locks in operation and an increase in the requirements per lockage, the figure would of course be reduced.

This dry cycle which began in 1929 will require a revision of our water supply studies, but since the cycle is not complete, this is a matter that can well be deferred for the present. It is hardly likely that the dry cycle will last much longer than the close of the present dry season.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending January 17, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Bogota.....	Colombian S. S. Line.....		January 11.....		641
Wido.....	North German Lloyd.....		January 11.....		64
Heredia.....	United Fruit Co.....		January 11.....		11½
Abraham Lincoln.....	Fred Olsen & Co.....		January 11.....		672
Moerdijk.....	Holland-America Line.....		January 11.....		145
Lockkatrine.....	Royal Mail S. P. Co.....		January 11.....		188
Brynje.....	Canadian Transport Line.....	January 11.....	January 11.....	382	(*)
Rugia.....	North German Lloyd.....	January 11.....	January 12.....	100	6
Washington.....	French Line.....	January 11.....	January 12.....	116	(*)
Laurits Swenson.....	Fred Olsen & Co.....	January 11.....	January 12.....	40	(*)
Tamaha.....	Standard Transportation Co.....	January 11.....	January 13.....	7,143	(*)
El Salvador.....	Panama Mail S. S. Co.....	January 11.....	January 13.....	207	777
Cauea.....	National Navigation Co.....	January 11.....	January 15.....	94	116
Buenos Aires Maru.....	Osaka Shosen Kaisha.....	January 12.....	January 12.....	(*)	6
Nosa Queen.....	N. O. & S. A. S. S. Co.....	January 12.....	January 15.....	160	608
Winnipeg.....	French Line.....	January 13.....	January 13.....	45	75
Suriname.....	United Fruit Co.....	January 13.....	January 15.....	513	(*)
Juan Sebastian Elcano.....	Spanish S. S. Line.....	January 13.....	January 16.....	372	199
Almelo.....	Royal Netherlands S. S. Co.....	January 13.....	January 16.....	184	785
San Vincente.....	States S. S. Co.....	January 14.....	January 14.....	58	(*)
Leme.....	Nav. Libera-Triestina.....	January 14.....	January 15.....	(*)	129
Oakland.....	Hamburg-American Line.....	January 14.....	January 15.....	100	430
Tela.....	United Fruit Co.....	January 14.....	January 15.....	751	97
Swiftscout.....	C. D. Mallory & Co.....	January 14.....	January 15.....	11,612	(*)
Sixzoala.....	United Fruit Co.....	January 14.....	January 15.....	323	373
Ulua.....	United Fruit Co.....	January 14.....	January 15.....	320	25
Cristobal.....	Panama R. R. S. S. Line.....	January 14.....	January 15.....	3,224	
City of San Francisco.....	Panama Mail S. S. Co.....		January 15.....		1,013
Ecuador.....	Panama Mail S. S. Co.....	January 15.....	January 16.....	1,925	267
La Paz.....	Pacific Steam Navigation Co.....	January 15.....	January 16.....	399	97
Argun Maru.....	Osaka Shosen Kaisha.....	January 16.....	January 16.....	10½	(*)
Asuka Maru.....	Nippon Yusen Kaisha.....	January 16.....	January 16.....	87	(*)
Caprera.....	Italian S. S. Line.....	January 16.....	January 16.....	24	1,080
Baralt.....	Royal Netherlands S. S. Co.....	January 16.....	January 16.....	326	
Aconcgagua.....	Chilean S. S. Line.....	January 16.....	January 16.....	(*)	14
Tacoma.....	Hamburg-American Line.....	January 16.....	January 16.....	22	158
Salvador.....	Pacific Steam Navigation Co.....	January 16.....	January 16.....	281	
Travemunde.....	Aluminium Line.....	January 16.....	January 17.....	303	77
Caldas.....	National Navigation Co.....	January 16.....	January 16.....	257	
Amapala.....	Standard Fruit & S. S. Co.....	January 16.....	January 17.....	167	295
Santa Elisa.....	Grace Line.....	January 16.....	January 17.....	75	440
Martinique.....	Colombian S. S. Line.....	January 16.....	January 17.....	83½	461
Alda.....	North German Lloyd.....	January 16.....	January 17.....	2	562
Dora K.....	R. Feuillebois.....	January 17.....	January 17.....	(*)	12
Tela.....	United Fruit Co.....	January 17.....	January 17.....	3	314
Cerigo.....	Hamburg-American Line.....	January 17.....	January 17.....	527	
August Thyssen.....	Aluminium Line.....	January 17.....	January 17.....	181	

* No cargo discharged.

* No cargo laded.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.
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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., January 28, 1931. No. 26.

Panama Canal Traffic During Calendar Year 1930, Segregated by Nationality of Vessels.

Vessels of 21 nationalities made up the commercial traffic through the Canal during the calendar year 1930. Forty-five and three-tenths per cent of the total transits were vessels of the United States and 25.4 per cent were of British registry. In order of net tonnage, Panama Canal measurement, the 10 leading nationalities were United States, British, Norwegian, German, Japanese, French, Dutch, Swedish, Danish, and Italian.

The following tabulation shows the commercial traffic through the Canal during the calendar year 1930, segregated according to nationality of vessels, together with corresponding totals for the calendar years 1929, 1928, and 1927. A similar table for the calendar year 1929 was published in THE PANAMA CANAL RECORD of January 29, 1930:

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered.			
				Gross.	Net.		
Argentinian.	1	3,816	3,370	5,518	3,146	\$2,747.52	.....
Belgian.....	25	125,689	107,596	159,232	96,653	131,879.12	190,271
British.....	¹ 4,492	7,876,772	5,798,958	9,624,484	5,872,054	6,979,985.17	6,923,532
Chilean....	² 45	166,870	121,548	244,747	136,020	151,306.40	96,927
Colombian..	76	11,735	11,425	17,590	11,417	13,507.38	12,785
Danish.....	103	480,444	360,879	574,387	364,185	433,758.31	536,538
Danzig.....	35	222,411	185,045	311,691	174,166	196,832.27	206,809
Dutch.....	139	652,334	440,814	738,016	442,463	544,333.06	551,582
Finnish....	1	2,135	2,126	2,342	1,974	2,562.00	2,400
French.....	123	668,589	500,077	821,162	498,907	597,737.66	565,185
German....	373	1,422,056	989,395	1,661,137	992,990	1,214,241.99	1,282,354
Greek.....	15	60,213	42,262	67,650	41,544	52,197.87	96,355
Italian....	61	415,493	296,872	536,214	316,810	363,084.55	225,382
Japanese..	187	956,413	802,174	1,210,572	793,356	993,921.34	1,159,708
Norwegian..	353	1,724,219	1,221,045	2,020,287	1,220,085	1,409,380.61	1,776,973
Panamanian	47	109,300	71,556	119,974	72,146	84,718.34	80,533
Peruvian...	1	3,544	3,510	4,763	3,089	4,252.80	4,057
Spanish....	³ 8	19,598	16,081	24,997	15,421	19,511.99	21,200
Swedish....	117	539,811	389,103	994,322	471,734	442,843.58	787,928
United States.....	2,666	13,722,865	10,493,721	17,067,783	10,481,124	12,435,516.75	13,204,088
Yugoslav...	17	76,566	58,954	93,979	58,783	71,706.25	123,304
Total, 1930.	5,885	29,260,873	21,916,511	36,300,847	22,068,067	26,146,024.96	27,847,941
Total, 1929.	6,430	30,353,189	23,138,682	38,061,989	23,241,639	27,592,715.84	31,450,493
Total, 1928.	6,334	28,943,437	22,217,654	36,359,701	22,268,506	26,375,962.41	29,401,581
Total, 1927.	6,085	28,610,984	22,360,998	36,381,124	22,353,512	26,231,022.94	29,102,538

¹ Includes 10 naval vessels of 46,647 displacement tons.

² Includes 3 naval vessels of 4,725 displacement tons.

³ Includes naval training ship of 3,383 displacement tons.

RELATION SHOWN BY PERCENTAGE.

The proportion of the traffic by vessels of various nationalities are indicated in the following tabulation in which percentages of the total traffic are shown instead of the actual figures, for the calendar years

1929 and 1930. In this table percentages are shown only for those nationalities having 75 or more transits during either 1929 or 1930:

Nationality.	No. of vessels.		Panama Canal net tonnage.		Tolls.		Tons of cargo.	
	1929.	1930.	1929.	1930.	1929.	1930.	1929.	1930.
United States.....	44.5	45.3	47.1	46.9	47.5	47.5	47.2	47.4
British.....	25.9	25.4	28.2	26.9	27.9	26.7	26.2	24.8
Norwegian.....	6.1	6.0	5.1	5.9	4.9	5.4	5.7	6.4
German.....	6.2	6.3	4.7	4.9	4.5	4.6	4.9	4.6
Japanese.....	2.3	3.2	2.5	3.3	2.8	3.8	2.9	4.2
French.....	1.7	2.1	1.7	2.3	1.9	2.3	1.7	2.0
Dutch.....	2.2	2.4	2.2	2.2	2.1	2.1	2.2	2.0
Swedish.....	2.2	2.0	2.0	1.8	1.9	1.7	2.7	2.8
Danish.....	1.4	1.7	1.2	1.6	1.2	1.7	1.6	1.9
Italian.....	1.3	1.0	1.6	1.4	1.6	1.4	1.0	0.8
Panamanian.....	0.9	0.8	0.3	0.4	0.3	0.3	0.3	0.3
Colombian.....	1.6	1.3	0.1	0.1	0.1	0.1	0.1	0.1
All other.....	3.7	2.5	3.3	2.3	3.3	2.4	3.5	2.7
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

During the calendar year 1930, vessels of 9 nationalities comprised 94.4 per cent of the total commercial transits of the Canal, and these vessels carried 96.2 per cent of the total cargo in transit through the Canal. Of these 9 nationalities, all showed decreases in comparison with the calendar year 1929 with the exception of Japan, France, and Denmark. The United States, with 2,666 transits, decreased 195, and Great Britain, with 1,492 transits, declined 175. Vessels of the United States registry carried 1,640,281 tons less cargo than in the previous year, and those of great Britain carried 1,339,323 tons less. Japan made the best showing during the year, with an increase of 37 transits and 248,989 tons more cargo.

The figures are given in the following tabulation:

Nationality.	Total transits.		Tons of cargo.		Increase.	
	1929.	1930.	1929.	1930.	Transits.	Cargo.
United States.....	2,861	2,666	14,844,369	13,204,088	195	1,640,281
British.....	1,667	1,492	8,262,855	6,923,532	175	1,339,323
Norwegian.....	392	353	1,784,651	1,776,973	39	7,678
German.....	402	373	1,532,149	1,282,354	29	249,795
Japanese.....	150	187	910,719	1,159,708	437	4248,989
French.....	113	123	538,491	565,185	410	426,694
Dutch.....	144	139	689,038	551,582	5	137,456
Swedish.....	140	117	864,502	787,928	23	76,574
Danish.....	94	103	496,451	536,538	49	440,087

* Indicates increase.

Supplement No. 2—Tariff No. 10.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
BALBOA HEIGHTS, C. Z., January 5, 1931.

ITEM 34.—STEVEDORING AND TRANSFERRING CARGO.

(Effective February 15, 1931.)

That part of paragraph 3(b) reading, "Cargo consigned to Cristobal-Colon on through bills of lading landed on the piers at Balboa—," etc., is hereby cancelled. Paragraph 24 is hereby cancelled and the following substituted:

24. Transportation—

(a) Transfer cargo between terminals:

Through cargo in transit across the Isthmus of Panama will be accepted for transfer across piers and for transportation over the Panama Railroad from the slings of the delivering carrier at one terminal to the slings of the receiving carrier at the other terminal, under the conditions of through bills of lading, and subject to

CANAL WORK IN DECEMBER, 1930.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of December, 1930.

BALBOA HEIGHTS, C. Z., January 19, 1931.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of December, 1930. In it have been incorporated summaries of the traffic through the Canal during the past calendar year.

TRAFFIC FOR CALENDAR YEAR 1930.

Commercial transits for the calendar year ended December 31, 1930, aggregated 5,885, as compared with 6,430 for the calendar year 1929, and 6,334 for the calendar year 1928. The daily average number of commercial transits for the past year was 16.12.

In addition to the 5,885 commercial transits, 113 small nonseagoing launches, and 583 noncommercial vessels, principally of the United States Army and Navy, transited the Canal, making the total number of transits for the calendar year, 6,581, a daily average on all traffic of 18.03.

Tolls on the 5,885 commercial vessels aggregated \$26,146,024.96, or a daily average of \$71,632.95.

In comparison with the calendar year 1929 (which, with respect to measured tonnage, tolls, and tons of cargo carried, was the record high year in Canal traffic), traffic for 1930 decreased 8.5 per cent in the number of commercial transits, 3.6 per cent in Panama Canal net tonnage, 5.2 per cent in tolls collected, and 11.5 per cent in cargo. The greater portion of the decrease in cargo tonnage was in the Atlanticto Pacific movement, which consists principally of general and manufactured goods. The movement in this direction declined from 10,166,211 tons in 1929 to 8,064,438 in 1930, a decrease of 2,101,773 tons, or 20.7 per cent, while that in the opposite direction dropped from 21,284,282 tons in 1929 to 19,783,503 tons in 1930, a loss of 1,500,779 tons, or 7.1 per cent. As noted above, the decrease in net tonnage and tolls collected for the 1930 traffic were considerably less than the decrease in transits, indicating a greater average tonnage per vessel in comparison with the previous year.

The following tabulation gives a ready comparison of the number of vessels, Panama Canal net tonnage, tons of cargo carried, and tolls collected from the commercial traffic passing through the Canal during the calendar years 1929 and 1930, by months:

COMMERCIAL TRAFFIC THROUGH THE CANAL DURING THE CALENDAR YEARS 1929 AND 1930, BY MONTHS.¹

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929.	1930.	1929.	1930.	1929.	1930.	1929.	1930.
January...	603	531	2,771,280	2,601,628	2,858,835	2,611,632	\$2,502,815.12	\$2,360,211.24
February...	522	491	2,428,530	2,369,255	2,550,498	2,377,900	2,211,961.20	2,131,386.12
March...	536	515	2,567,961	2,505,859	2,743,568	2,558,238	2,343,865.55	2,260,002.36
April.....	540	489	2,488,176	2,479,096	2,719,668	2,456,782	2,281,087.27	2,232,763.00
May.....	524	479	2,496,905	2,418,633	2,536,839	2,261,616	2,296,546.57	2,162,898.60
June.....	503	478	2,352,431	2,358,237	2,424,002	2,147,181	2,127,805.97	2,100,994.53
July.....	527	488	2,468,280	2,438,895	2,598,162	2,402,047	2,259,582.37	2,180,511.82
August....	541	465	2,558,739	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
September.	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.58
October...	564	517	2,747,949	2,584,160	2,845,643	2,394,410	2,485,897.71	2,288,992.08
November.	525	479	2,498,906	2,371,487	2,534,631	2,263,200	2,244,895.94	2,098,357.36
December.	522	495	2,548,771	2,473,626	2,524,934	2,166,884	2,309,030.88	2,192,583.85
Total...	6,430	5,885	30,353,189	29,260,873	31,450,493	27,847,941	27,592,715.84	26,146,024.96

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these governments, and vessels transiting solely for repairs, do not pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

COMMERCIAL TRAFFIC BY CALENDAR YEARS, 1914 TO 1930.

The following statement is a summary of the traffic through the Canal by calendar years since its opening:

Calendar year.	No. of ships.	Panama Canal net tonnage.	United States net tonnage.	Registered.		Tolls.	Tons of cargo.
				Gross.	Net.		
1914.....	¹ 350	1,284,293	(3)	1,789,721	(3)	\$1,508,737.56	1,758,625
1915.....	² 1,154	3,902,512	(3)	(3)	(3)	4,297,467.11	4,893,422
1916.....	² 1,217	3,817,704	3,078,623	(3)	(3)	3,671,162.68	4,774,822
1917.....	1,960	6,217,054	5,116,001	(3)	(3)	6,107,696.63	7,443,610
1918.....	2,070	6,409,886	5,369,341	(3)	(3)	6,317,455.39	7,284,159
1919.....	2,130	6,932,984	5,828,118	7,719,306	4,919,189	6,973,095.30	7,463,151
1920.....	2,814	10,378,265	8,543,408	13,300,887	8,458,401	10,295,362.21	11,236,119
1921.....	2,783	11,435,811	9,303,687	14,451,830	9,225,519	11,261,098.80	10,707,005
1922.....	2,997	12,992,573	10,375,771	16,315,147	10,310,113	12,573,407.77	13,710,556
1923.....	5,037	24,737,437	19,979,628	31,658,095	19,931,570	22,966,838.18	25,160,545
1924.....	4,893	24,411,700	19,414,771	31,127,724	19,440,024	22,809,416.34	25,892,134
1925.....	4,774	22,958,158	13,141,695	29,368,840	18,228,704	21,380,759.70	23,701,277
1926.....	5,420	25,836,241	20,254,503	33,044,274	20,329,791	23,901,540.04	27,586,051
1927.....	6,085	28,610,984	22,360,998	36,381,124	22,353,512	26,231,022.94	29,102,538
1928.....	6,334	28,943,437	22,217,654	36,359,701	22,268,506	26,375,962.41	29,401,581
1929.....	6,430	30,353,189	23,138,682	38,061,959	23,241,639	27,592,715.84	31,450,493
1930.....	5,885	29,260,873	21,916,511	36,300,847	22,068,067	26,146,024.96	27,847,941
Total.....	62,333	278,483,161				260,409,763.86	289,414,029

¹ Canal opened to traffic August 15, 1914.

² Canal opened to traffic for approximately 8½ months only.

³ Indicates tonnage figures not available.

NUMBER OF VESSELS TRANSITING CANAL IN 1930.

The total number of vessels and craft of all kinds transiting the Canal during the calendar year 1930, by months, is shown in the following tabulation:

	Commercial.		Noncommercial.			Total.
	Vessels.	Launches. ¹	United States Government.	For repairs.	Panamanian Government.	
February.....	491	3	73	4	1	572
March.....	515	7	47	.....	1	570
April.....	489	7	43	1	1	541
May.....	479	14	48	3	2	546
June.....	478	14	73	.....	2	567
July.....	488	10	33	.....	2	533
August.....	465	19	41	.....	1	526
September.....	458	15	26	1	.....	500
October.....	517	7	39	1	2	566
November.....	479	4	40	3	1	527
December.....	495	9	31	2	.....	537
Total.....	5,885	113	546	22	15	6,581

¹ Miscellaneous small nonseagoing craft which, although paying tolls, are excluded from the statement of commercial traffic.

CANAL TRAFFIC FOR DECEMBER, 1930.

During the month of December, 1930, 495 commercial vessels and 9 small launches transited the Canal. In addition to these there were 31 vessels belonging to the United States Government, and 2 vessels transiting solely for repairs, on which no tolls were collected, making a total of 537 transits for the month, or a daily average of 17.32

Tolls on the commercial vessels amounted to \$2,192,583.85, and on the launches to \$41.85, a total of \$2,192,625.70, or a daily average on all traffic of \$70,729.85.

Although showing a slight increase in comparison with the previous month (November, 1930), commercial traffic for the past month showed a decrease as compared with December, 1929, of 5.2 per cent in transits and 5.0 per cent in tolls collected.

The total numbers of craft of all kinds transiting the Canal during the month of December, 1930, and in the two preceding years are shown in the following tabulation:

	December, 1928.	December, 1929.	December, 1930.
Commercial vessels.....	579	522	495
Launches (under 20 tons measurement).....	11	9	9
Noncommercial vessels:			
United States Government.....	45	22	31
Panamanian Government.....	2	3	.....
Vessels for repairs.....	.....	1	2
Total.....	637	557	537

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun.....	3	4	7
Pedro Miguel.....	6	11	17
Miraflores.....	6	10	16
Total.....	15	25	40

The following is a summary of the commercial traffic for December in the years 1928, 1929, and 1930, and comparison with the monthly averages for the calendar year 1930:

	December, 1928.	December, 1929.	December, 1930.	Average per month for calendar year 1930.
Number of vessels.....	579	522	495	490
Panama Canal net tonnage.....	2,698,140	2,548,771	2,473,626	2,438,406
United States net tonnage.....	2,055,648	1,929,935	1,834,879	1,826,376
Registered gross tonnage.....	3,359,731	3,173,953	3,060,391	3,025,071
Registered net tonnage.....	2,056,933	1,939,162	1,848,484	1,839,006
Tolls.....	\$2,443,029.39	\$2,309,020.88	\$2,192,583.85	\$2,178,835.41
Tons of cargo carried.....	2,714,987	2,524,934	2,166,884	2,320,662

The average daily number of transits, tonnage (Panama Canal measurement), tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for calendar year 1930.
	December, 1928.	December, 1929.	December, 1930.	
Number of transits.....	18.67	16.84	15.97	16.12
Panama Canal net tonnage.....	87,037	82,218	79,794	80,167
Tolls.....	\$78,807.39	\$74,484.87	\$70,728.51	\$71,632.95
Tons of cargo.....	87,580	81,449	69,899	72,296

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of December in 1928, 1929, and 1930, are shown in the following tabulation:

	Average per vessel.		
	December, 1928.	December, 1929.	December, 1930.
Panama Canal net tonnage.....	4,660	4,883	4,997
United States net tonnage.....	3,550	3,697	3,707
Registered gross tonnage.....	5,803	6,090	6,183
Registered net tonnage.....	3,553	3,715	3,734
Tolls.....	\$4,219.39	\$4,423.43	\$4,429.46
Tons of cargo (including vessels in ballast).....	4,689	4,837	4,378
Tons of cargo (laden vessels only).....	5,740	5,562	5,209

NATIONALITY OF VESSELS.

Eighteen nationalities were represented in the commercial traffic through the Canal in December, 1930. Vessels of United States registry, with 206, led in the number of transits, while those flying the British flag, with 130, were second. Vessels of these two nationalities made up approximately 68 per cent of the total transits for the month. Germany and Norway were next with 34 and 31 respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo carried through the Canal during the month of December, 1930, was 2,166,884 tons. Cargo from the Atlantic to the Pacific aggregated 551,712 tons, compared with 554,098 tons in November, 1930, and 843,747 tons in December, 1929. From the Pacific to the Atlantic there were 1,615,172 tons, as compared with 1,709,102 tons in November, 1930, and 1,681,187 tons in December, 1929.

From the Atlantic to the Pacific various manufactured goods totaling 178,485 tons, constituted the heaviest item of cargo, followed by mineral oils with 38,098 tons, cotton with 27,847 tons, cement with 21,478 tons, and paper with 21,308 tons. There was a decrease of 292,035 tons, or 34.6 per cent, in cargo moving in this direction as

compared with December, 1929, owing to the general decline of practically all the important commodities normally routed in this direction.

From the Pacific to the Atlantic mineral oils, totaling 396,758 tons, constituted the heaviest item, followed by lumber with 280,728 tons, nitrates with 197,437 tons, wheat with 196,297 tons, and ores with 76,454 tons. Mineral oil shipments declined 90,519 tons, or 18.6 per cent, and ores 152,002 tons, or 66.5 per cent. Wheat increased 86,933 tons, or 79.5 per cent; lumber, 48,279 tons, or 20.8 per cent; and nitrates, 22,863 tons, or 13.1 per cent, in comparison with December, 1929.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton, nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.915 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.727 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of December, 1930, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$9,091.25	\$8,045.00		\$1,046.25
British.....	607,318.60	644,010.80	\$36,692.20	
Chilean.....	14,147.50	16,922.00	2,774.50	
Colombian.....	2,081.13	1,742.60		338.53
Danish.....	59,432.63	62,599.80	3,167.17	
Danzig.....	6,585.00	6,127.00		458.00
Dutch.....	56,579.27	66,164.60	9,585.33	
French.....	36,705.00	42,402.00	5,697.00	
German.....	115,804.71	128,339.00	12,534.29	
Greek.....	3,090.24	2,575.20		515.04
Italian.....	44,096.25	46,416.00	2,319.75	
Japanese.....	100,691.84	97,287.20		3,404.64
Norwegian.....	123,445.60	142,745.00	19,299.40	
Panamanian.....	5,026.30	6,979.00	1,952.70	
Spanish.....	5,343.88	4,916.40		427.48
Swedish.....	31,635.24	34,964.20	3,328.96	
United States.....	964,041.91	1,001,956.80	37,914.89	
Yugoslav.....	7,467.50	9,195.00	1,727.50	
Total.....	2,192,583.85	2,323,387.60	136,993.69	6,189.94
Net increase for all traffic.....			130,803.75	

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$28,812.29
United States foreign trade.....	8,203.41
United States—Canal Zone trade.....	899.19
Total.....	37,914.89

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in December, 1930, is shown in the following tabulation, segregated by nationality of vessels and direction of transit, laden vessels only are included.

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....		1.70	1.70
British.....	.54	1.29	.95
Chilean.....	.36	.97	.80
Colombian.....	1.90	.99	1.53
Danish.....	.52	1.66	1.04
Danzig.....		1.83	1.83
Dutch.....	.35	1.27	.76
French.....	.36	1.40	.89
German.....	.50	1.37	1.03
Italian.....	.17	1.40	.55
Japanese.....	.76	1.07	.91
Norwegian.....	.85	1.54	1.36
Panamanian.....		.36	.36
Spanish.....		1.88	1.88
Swedish.....	.79	3.93	2.17
United States.....	.68	1.33	1.05
Yugoslav.....		1.78	1.78
Averages, December, 1930.....	.60	1.37	1.03
Averages, December, 1929.....	.84	1.42	1.14
Averages, December, 1928.....	.87	1.50	1.23

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of December is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	3	11,305	\$12,436.25	38	216,170	\$219,664.05
Ballast.....	36	204,431	147,190.32			
General cargo ships:						
Laden.....	173	887,118	799,134.80	202	964,563	871,978.65
Ballast.....	36	170,018	124,909.94	2	431	315.78
Noncargo-carrying ships:						
Passenger.....	1	18,874	16,412.50			
Tug.....	1	118	111.00			
Yachts.....	2	578	416.16	1	20	14.40
Total.....	252	1,292,442	1,100,610.97	243	1,181,184	1,091,972.88
Method of propulsion:						
Steam.....	171	857,482	752,998.00	179	859,621	800,614.65
Motor.....	80	434,402	347,211.21	64	321,563	291,358.23
Motor schooner.....	1	558	401.76			
Total.....	252	1,292,442	1,100,610.97	243	1,181,184	1,091,972.88

Of the 350 steam-driven vessels, 239 were oil burning, 103 coal burning, and 8 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of December, 1930. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Ammunition ships.....	1	3 4,405	\$5,506.25			
Battleships.....	1	32,600	16,300.00			
Gunboats.....	3	4,425	2,212.50	2	3,000	\$1,500.00
Minesweepers.....	3	2,850	1,425.00	2	1,900	950.00
Submarines.....	3	2,584	1,292.00	3	2,584	1,292.00
Supply ships.....	1	3,454	4,144.80			
Tankers.....				2	12,516	15,645.00
U. S. Army vessels:						
Launches.....	1	20	15.00			
Mineplanters.....				1	1,208	604.00
Transports.....	2	7,816	9,770.00	2	7,816	9,770.00
Tugs.....	1	46	34.50	1	46	34.50

² Indicates displacement tonnage.

³ Indicates Panama Canal net tonnage.

⁴ Indicates United States net tonnage

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
Treasury Department vessels: Coast guard vessels.....	1	912	\$456.00	1	912	\$456.00
Total, U. S. Government.....	17		41,156.05	14		30,251.50
Vessels for repairs: General cargo.....				1	3,217	4,021.25
Tankers.....				1	2,974	2,230.50
Grand total.....	17		41,156.05	16		36,503.25

¹ Indicates displacement tonnage. ² Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of December, 1930, carried cargo as follows: Atlantic to Pacific, 4,825 tons; Pacific to Atlantic, 29,117 tons; total, 33,942 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of December, 1930. These launches, although paying tolls, are excepted from statements concerning commercial traffic.

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	6	45	\$37.35
Pacific to Atlantic.....	3	6	4.50
Total.....	9	51	41.85

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of December, 1930, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	35,527	20,167	55,694
Local cargo shipped..... tons..	6,582	1,041	7,623
Transit cargo arriving..... tons..	2,178,446	2,154,765	4,333,211
Transit cargo clearing..... tons..	2,190,336	2,140,315	4,330,651
Cargo received for transshipment..... tons..	26,722	3,900	30,622
Cargo transhipped..... tons..	25,219	3,244	28,463
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	174	50	224
Number of releases issued.....	786	276	1,062
Tons received.....	2,154	773	2,927
Tons withdrawn.....	1,772	595	2,367
Packages received.....	9,362	5,830	15,192
Packages withdrawn.....	6,045	5,085	11,130
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	46	3	49
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons..	15,332	126	15,458
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	126	32	158
Panama Railroad Company..... tons..	10	6	16
U. S. Army, including vessels..... tons..	31	1	32
Individuals and companies..... tons..	221		221
Transferred to Navy..... tons..	165		165
Total sales and issues..... tons..	15,855	165	16,020
Coal on hand, December 1, 1930..... tons..	55,211		55,211
Coal on hand, January 1, 1931..... tons..	39,326		39,326
Coal received from Navy..... tons..		165	165

	Cristobal.	Balboa.	Total.
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls...	9,048.08	13,371.89	22,419.97
Panama Railroad Company..... bbls...	890.85	466.49	1,357.34
U. S. Army and Navy..... bbls...	522.50	138.81	661.31
U. S. Treasury Department..... bbls...		2,105.60	2,105.60
Individuals and companies..... bbls...		164.40	164.40
Total sales and issues..... bbls...	10,461.43	16,247.19	26,708.62
Fuel oil on hand, January 1, 1931..... bbls...			
Diesel oil received during December, 1930..... bbls...	28,994.90	29,152.66	58,147.56
Diesel oil issued and sold during December, 1930..... bbls...		35,400.80	35,400.80
Diesel oil borrowed from Union Oil Co..... bbls...	184.73	2,677.89	2,862.62
Diesel oil on hand, January 1, 1931..... bbls...	184.73		184.73
Diesel oil on hand, January 1, 1931..... bbls...	1,083.28	41,875.32	42,958.60
Miscellaneous transfers..... bbls...	781.52	11,351.59	12,133.11
Gasoline and kerosene pumped for The Panama Canal..... bbls...	2,558.73	4,964.24	7,522.97
Gasoline pumped for individuals and companies..... bbls...	822.37	7,345.67	8,168.04
Oil pumped for individuals and companies:			
Receipts..... bbls...	186,613.03	142,563.10	329,176.13
Issues..... bbls...	271,117.10	201,339.03	472,456.13
Oil pumped for U. S. Navy..... bbls...	204.12	14,538.10	14,742.10
Total fuel oil, gasoline and kerosene handled..... bbls...	472,742.91	436,427.61	909,170.52
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	19	11	30
Measured for Panama Canal net tonnage.....	4	4	8
Remeasured for Panama Canal net tonnage.....	19	4	23
Panama Canal net tonnage corrected.....	10	1	11
U. S. equivalent tonnage corrected.....	15	7	22
Services of harbor equipment:			
Tugs, total operating hours.....	433	242½	675½
Launches, total operating hours.....	1,311	1,458½	2,769½
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$14,071.25	\$7,403.75	\$21,475.00
Pilotage.....	19,199.00	8,201.00	27,400.00
Seamen.....	11,780.00	11,196.00	22,976.00
Launch service.....	1,993.00	2,833.00	4,826.00
Wharfage.....	15,041.90	6,283.66	21,325.56
Ships measured.....	110.00	55.00	165.00
Miscellaneous.....	464.21	170.50	634.71
Ships repaired at Panama Canal shops:			
Commercial.....	44	15	59
U. S. Army and Navy.....	7	8	15
Panama Canal equipment.....	6	9	15
Total.....	57	32	89
Vessels dry-docked:			
Commercial.....	9	4	13
U. S. Army and Navy.....	4	1	5
Panama Canal equipment.....	1	1	2
Total.....	14	6	20
Clearances issued.....	296	254	550
Bills of health issued.....	299	257	556

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal..	560	3,604,609	2,193,492	520	3,214,860	1,961,800
Vessels entering port but not transiting Canal.	66	451,131	266,984	8	38,329	24,428
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	126	803,689	480,747	103	689,764	412,789
<i>Ships clearing.</i>						
All vessels, including those transiting Canal..	557	3,600,459	2,189,375	514	3,199,316	1,948,350
Vessels clearing port but not transiting Canal.	64	435,402	256,219	6	35,222	22,418
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	124	810,227	484,203	102	691,024	413,478

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports	1,391	913	2,304	118	193	311
From Pacific ports	118	112	230	296	240	536
Total disembarking	1,509	1,025	2,534	414	433	847
Embarking:						
For Atlantic ports	806	676	1,482	62	176	238
For Pacific ports	117	99	216	243	187	430
Total embarking	923	775	1,698	305	363	668
Remaining on board:						
From Atlantic to Pacific ports	1,800	2,795	4,595	1,862	2,436	4,298
From Pacific to Atlantic ports	786	1,128	1,914	819	1,209	2,028
From Atlantic to Atlantic ports	2,655	111	2,766			
From Pacific to Pacific ports				2	3	5
Total remaining on board	5,241	4,034	9,275	2,683	3,648	6,331
Total arriving	6,750	5,059	11,809	3,097	4,081	7,178
Total departing	6,164	4,809	10,973	2,988	4,011	6,999

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific	252	63	25.0
Pacific to Atlantic	243	58	23.9
Total	495	121	24.4

In addition to the aforesaid, 52 passenger-carrying vessels called at the port of Cristobal and 5 at Balboa without transiting the Canal, making a total of 178 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of December, 1930, 43 commercial airplanes entered and 42 cleared at Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of December, 1930, together with the total sales in the corresponding month in 1929 and 1928:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels	\$1,778.90	\$10,131.71	\$22,007.08	\$127.01	\$6,775.90	\$40,820.60
Government vessels	98.05	698.08	2,211.72	69.37	2,292.54	5,369.76
P. R. R. vessels		225.63	211.08	681.12	51.27	1,169.10
Total sales, December, 1930.	1,876.95	11,055.42	24,429.88	877.50	9,119.71	47,359.46
Total sales, December, 1929.	2,310.23	14,292.05	40,760.26	882.80	8,449.49	66,694.83
Total sales, December, 1928.	4,059.92	17,666.78	57,682.04	1,125.14	9,116.95	89,650.83
Sales at Balboa to:						
Commercial vessels	1,004.00	2,654.29	17,027.98	799.14	9,093.47	30,578.88
Government vessels	216.25	1,780.39	8,696.85	688.88	2,097.26	13,479.63
P. R. R. vessels . . . . .		.36			8.75	9.11
Total sales, December, 1930.	1,220.25	4,435.04	25,724.83	1,488.02	11,199.48	44,067.62
Total sales, December, 1929.	1,186.58	10,975.71	25,995.07	916.06	4,637.00	43,710.42
Total sales, December, 1928.	3,097.76	10,834.52	40,119.66	737.13	3,766.52	58,555.59

The aggregate sales to Government vessels during the month was \$18,849.39; to Panama Railroad vessels, \$1,178.21; and to other commercial vessels, \$71,399.48; making the total sales to all vessels, \$91,427.08. The figures are subject to minor changes on final audit.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of December, 1930, as compared with the corresponding month in 1929 and 1928:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. †			Dec., 1928.	Dec., 1929.	Dec., 1930.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	231	237	468	10	8	18	568	509	486
Pedro Miguel.....	237	246	483	13	13	26	601	538	509
Miraflores.....	238	246	484	13	13	26	590	533	510
Number of vessels put through locks.									
Gatun.....	241	252	493	25	30	55	672	576	548
Pedro Miguel.....	243	252	495	30	37	67	715	623	562
Miraflores.....	243	252	495	30	36	66	721	618	561

† Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	35	39	40
Panama Canal equipment.....	7	17	16
Launches (under 20 tons).....	12	9	8
Vessels for repairs.....	1	2	2

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in December, 1930, as compared with the preceding month and the corresponding month in 1929:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	2,071,880,000	1,676,650,000	1,524,550,000
Maintenance.....	53,150,000		
Leakage.....	40,000,000	20,000,000	20,000,000
Total, December, 1930.....	2,165,030,000	1,696,650,000	1,544,550,000
Total, November, 1930.....	2,072,780,000	1,635,150,000	1,533,080,000
Total, December, 1929.....	1,900,300,000	1,787,390,000	1,588,490,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of December, 1930, are shown in comparative form in the following tabulation:

	December.		December—Years of record.		
	1930.	1929.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Discharge of Chagres River at Alhajuela.....	2,367	2,167	17,300	1,265	3,687
Maximum momentary discharge for the month.....	11,922	9,455	154,000		
Gatun Lake watershed, total yield.....	5,436	4,583	10,959	3,005	7,124
Gatun Lake watershed, net yield.....	4,703	3,866	10,370	2,158	6,484
Draft on Gatun Lake for lockages and power.....	2,980	2,844	3,054	2,091	2,399

¹ December 26, 1909.

² 1914 excluded.

³ Full power load.

The monthly mean discharge of the Chagres River at Alhajuela for December, 1930, was 2,367 c. f. s., which is 36 per cent below the 29-year average of 3,687 c. f. s.

The maximum monthly mean discharge on record for December is 17,300 c. f. s. in 1909, and the minimum is 1,265 c. f. s. in 1905. There were no rises of 5 feet or more during the month. The maximum momentary discharge for the month was 11,922 c. f. s. at elevation 98.52 feet on the 11th, and the minimum was 1,223 c. f. s. at elevation 92.55 feet on the 31st. The maximum momentary discharge on record

for December is 154,000 c. f. s. at elevation 121 feet on December 26, 1909, and the minimum is 970 c. f. s. at elevation 92.16 feet, on December 31, 1911.

Gatun Lake varied in elevation during December from a minimum of 86.70 feet on the 31st, to a maximum of 87.09 feet on the 9th and 11th, and averaged 86.96 feet. The elevation at midnight on November 30th was 86.84 feet and at midnight on December 31st 86.76 feet, showing a net fall of eight-hundredths of a foot. The total yield of Gatun Lake watershed was 5,436 c. f. s., which is 24 per cent below the 17-year December average of 7,124 c. f. s. The maximum total yield on record for December is 10,959 c. f. s. in 1928 and the minimum is 3,005 c. f. s. in 1918.

Miraflores Lake varied between elevations 53 feet on the 1st to 54.34 feet on the 30th. The mean elevation for the month was 53.78 feet, and at midnight on the 31st it was 53.98 feet.

SEISMOLOGY.

Two seismic disturbances were recorded during the month, on the 15th and 21st.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,593,200 kilowatt hours, and the computed water consumption was 4,177,184,909 cubic feet. Continuous service was maintained through the month. The Miraflores Diesel-electric station had a gross generator output of 1,200 kilowatt hours, and the fuel oil consumption was 9.36 barrels. This plant was operated only for peak-load service during the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 46 vessels during the month. There were 401 work orders issued during the month, as compared with 406 issued during the previous month.

MECHANICAL DIVISION.

During the month of December, 1930, miscellaneous repairs were made on 57 vessels at Cristobal and 32 at Balboa. Fourteen vessels were dry-docked at Cristobal and 6 at Balboa. Work on the United States Navy's gunboat *Asheville*, which was in dry dock for general overhaul, was completed during the month. Work was carried forward on the overhaul of the United States Navy's submarine *S-17*. Work was completed on the steamer *Ludwigshafen* which was at Balboa shops for repairs to fire damage. The cable ship *All America* was at Balboa shops for docking and annual overhaul.

MUNICIPAL ENGINEERING DIVISION.

On the Thatcher Highway under construction from the west bank of the Canal opposite Balboa to the Zone boundary line near Arraijan, 3,400 cubic yards were graded, 6 culverts placed, and 4,000 linear feet cleared. Miscellaneous municipal engineering work around the Naval Air Station, Coco Solo, consisting of excavating, concreting, pipe laying, etc., was performed during the month.

Work on several improvement projects in the cities of Colon and Panama, and in the Canal Zone, was carried on.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 765,652,500 gallons.

DREDGING DIVISION.

The general movement along the waterfront of West Culebra slide continued throughout the month with an average movement of 1.2 feet toward the Canal between stations 1770-00 and 1792-00 W. and 1.5 feet southward between stations 1770-00 and 1776-00 W. The reference points on this slide showed no movement. There were no other slides or any new bank breaks in the Cut during the month. There was no interference with shipping on account of slides during the month.

The total excavation during December, 1930, was 783,215 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
	<i>Cubic yds.</i>	<i>Cubic yds.</i>	<i>Cubic yds.</i>
Work excavation:			
Canal prism, Gaillard Cut—			
Project No. 3	16,050	95,950	112,000
Canal prism, Pacific entrance—			
Project No. 1	11,000	42,850	42,850
Maintenance		1,700	12,700
Balboa inner harbor—			
Project No. 1, extension No. 1	91,400		91,400
Maintenance	343,550	51,100	394,650
Plant excavation:			
Colon fill	126,500		126,500
Dredging sand at Chame	3,115		3,115
Total	591,615	191,600	783,215

The ferry operating at the north end of Pedro Miguel locks functioned 31 days during the month. One thousand three hundred and sixty-four single trips were made, and 166 Panama Canal, 309 U. S. Army, and 5,076 other vehicles, a total of 5,551, were ferried across the Canal.

MADDEN DAM PROJECT.

Studies of an arch for a bridge over the spillway, of a concrete gravity dam, and a curved gravity dam were made. A comparison of a curved gravity dam and a straight gravity dam was prepared. Studies were made to determine maximum expected flood discharge for Alhajuela and Gatun. Flood hydrographs were produced and a flood regulation started. Tables and charts were prepared for the geological studies and report for the damsite. Two hundred and ninety-six linear feet of drilling were completed during the month. A first draft of final report on drilling was made. Compression tests were made at Miraflores laboratory of specimen cores from shot drill hole N-11. Permeability tests on stone were made of cores from drill holes L-47, L-63, and L-66, and report received from laboratory. Compression test of stone in place on damsite 6-B was completed. Reports were prepared on compression test of foundation stone in place, test of stone for elasticity, and on Madronal sinkholes. Observations of water table in drill holes were made weekly by the Section of Surveys. Laboratory report was received on results obtained from daily samples taken from the Chagres River.

The consulting board, consisting of four members, arrived from the United States on December 24th, and spent their time equally between the field and office.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on December 31, 1930, was 23,963, composed of 8,066 Americans, 2,881 of whom were men, 2,427 women, and 2,758 children; 158 Europeans, 80 of whom were men, 25 women, and 53 children; and 15,739 West Indians, 4,340 of whom were men, 2,848 women, and 8,551 children. The total number of persons in quarters on December 31, 1929, was 22,163.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of December 17, 1930, with a comparison of the working force for the preceding month and for December, 1929:

	Total employees.		As of December 17, 1930.		
	December, 1929.	November, 1930.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	160	117	56	61	117
Electrical.....	344	366	167	187	354
Municipal Engineering.....	802	972	100	935	1,035
Lock Operation.....	935	989	254	800	1,054
Dredging.....	1,262	1,181	200	982	1,182
Madden Project.....	720	192	21	118	139
Mechanical.....	1,430	1,426	508	911	1,419
Marine.....	785	777	200	561	761
Fortifications.....	281	165	22	287	309
Total.....	6,719	6,185	1,528	4,842	6,370
Supply Department:					
Quartermaster.....	2,437	1,730	201	1,689	1,890
Commissary.....	1,596	1,579	232	1,324	1,574
Cattle Industry—Plantations.....	117	99	2	96	98
Hotel Tivoli.....	120	118	8	107	115
Hotel Washington.....	110	107	8	103	111
Transportation.....	326	324	80	265	345
Total.....	4,706	3,957	531	3,602	4,133
Accounting Department.....	209	209	200	6	206
Health Department.....	1,158	1,108	280	840	1,120
Executive Department.....	852	883	547	339	886
Total.....	2,219	2,200	1,027	1,185	2,212
Panama Railroad Company:					
Superintendent.....	332	289	48	253	301
Transportation.....	173	193	63	124	187
Receiving & Forwarding Agency.....	1,269	1,222	80	1,292	1,372
Coaling Stations.....	247	208	43	183	226
Total.....	2,021	1,912	234	1,852	2,086
Grand total, December, 1929.....	15,665				
Grand total, November, 1930.....		14,254			
Grand total, December, 1930.....			3,320	11,481	14,801

Additions to the gold force on the Isthmus in December were as follows: Employed in the United States, 5; reemployed in the United States, 19; employed on the Isthmus, 9; reemployed on the Isthmus, 8; total, 41. Separations from the gold force totaled 20, as follows: Resigned, 8; discharged, 8; retired, 3; died, 1. At the end of the month there were on file 690 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 177 deaths occurred during the month of December, 1930, among the population of the Canal Zone, and the cities of Panama and Colon (population, 143,636), which is equivalent to an annual death rate of 14.79 per 1,000 population. The leading causes of death were: Tuberculosis (various organs), 33; pneumonia (broncho and lobar), 21; diarrhea and enteritis, 14; nephritis (acute and chronic), 14; cancer, 8; and apoplexy, 8. There was 1 death each from typhoid fever, dysentery, and leprosy. There were 29 deaths among nonresidents, which are not included in the above statistics.

There were 347 live births and 14 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 30.16. Deaths among children under one year of age numbered 44, giving an infant mortality rate based on the number of live births reported, of 126.80.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during the month was 130, of whom 25 were employees (9 white and 16 colored), 20 were members of employees' families (4 white and 16 colored), 6 were Canal Zone agriculturists, 52 were other civilian nonemployees, and 27 were Army and Navy personnel. Of the 45 employees and members of employees' families, 31 were probably infected outside our sanitated areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick.

There was one death from malaria among residents, a Zone farmer.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisition for which invoices were received on the Isthmus during the month totaled \$433,265.80, of which \$421,661.86 was for the Department of Operation and Maintenance, and \$11,603.94 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material, amounted to \$38,808.64.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of November, 1930, as compared with November, 1929, with the figures for the first five months of the current fiscal year as compared with the same period in the fiscal year 1930.

It is impossible to submit figures for the month of December at the time of writing this report, since all charges, etc., involved in the accounting have not been completed.

	November, 1929.	November, 1930.	To the end of November.	
			Last year.	This year.
Tolls.....	\$2,244,647.00	\$2,098,377.58	\$11,519,476.03	\$10,704,264.35
Other receipts.....	352,894.23	337,899.78	1,769,401.59	1,637,005.90
Total transit revenues.....	2,597,541.23	2,436,277.36	13,288,877.62	12,341,270.25
Total transit expenses.....	1,094,667.84	1,163,598.73	5,506,805.33	5,612,376.79
Net transit revenues.....	1,502,873.39	1,272,678.63	7,782,072.29	6,728,893.46
Three per cent capital charge.....	616,247.58	626,459.17	3,098,594.61	3,129,679.98
Transit surplus.....	886,625.81	646,219.46	4,683,477.68	3,599,213.48
Business revenues.....	1,579,451.83	1,275,216.57	7,897,246.09	7,542,052.47
Business expenses.....	1,513,097.54	1,217,967.79	7,488,209.54	7,213,391.58
Net business revenues.....	66,354.29	57,248.78	409,036.55	328,660.89
Three per cent capital charge.....	62,445.51	65,003.56	323,390.21	337,961.51
Business surplus.....	3,908.78	(7,754.78)	85,646.34	(9,300.62)
Combined revenues.....	4,176,993.06	3,711,493.93	21,186,123.71	19,883,322.72
Combined expenses.....	2,607,765.38	2,381,566.52	12,995,014.87	12,825,768.37
Net revenues.....	1,569,227.68	1,329,927.41	8,191,108.84	7,057,554.35
Three per cent capital charge.....	678,693.09	691,462.73	3,421,984.82	3,467,641.49
Combined surplus.....	890,534.59	638,464.68	4,769,124.02	3,589,912.86

() Indicates deficit.

Respectfully,

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, January 24, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Longleaford.	18	00	18	6	18	18	18	17	15	British.	Medonley S. S. Co.	370.0	56.2	14.0	Tyne, England.	Vancouver, B. C.	Ballast.	5,195	3,515
Baral.	16	00	15	18	15	20	18	16	20	Dutch.	Royal Neth. S. S. Co.	200.0	33.1	11.10	Cristobal, C. Z.	Guayaquil, Ecuador	General.	83	742
Mexican.	18	2	18	7	18	17	18	18	00	American.	Amer-Hawaiian Line	472.3	57.2	18.8	Boston, Mass.	Portland, Ore.	General.	2,377	9,258
S-17.	18	2	18	10	18	18	18	18	00	American.	U. S. Navy	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.	2	6,044
Somme 3.	17	22	18	11	17	52	18	18	48	American.	U. S. Army	436.0	58.0	25.6	Cristobal, C. Z.	San Francisco, Cal.	General.	2	6,687
Pacific Oak	18	16	19	3	20	19	11	28	19	American.	Dimon S. S. Corp.	410.0	54.2	16.9	Philadelphia, Pa.	Seattle, Wash.	General.	2,623	4,974
El Ciervo	18	22	19	5	15	19	12	50	19	British.	Anglo-Ecuador. Oilfields.	407.4	52.2	19.8	Philadelphia, Pa.	La Libertad, Ecua.	Ballast.	6,046	4,326
Laganbank 4.	18	22	30	19	6	10	19	13	54	British.	Bank Line, Ltd.	427.0	57.0	21.6	Baltimore, Md.	Swatow, China.	General.	4,126	7,507
Cingalese	19	00	08	19	6	10	19	14	45	British.	Bank Line, Ltd.	427.0	57.0	21.6	Baltimore, Md.	Swatow, China.	General.	4,126	7,507
Prince 4.	19	00	08	19	6	10	19	14	45	British.	Bank Line, Ltd.	427.0	57.0	21.6	Baltimore, Md.	Swatow, China.	General.	4,126	7,507
Fresnohar 4.	19	1	00	19	7	30	19	15	52	British.	Prince Line, Ltd.	441.0	60.0	20.9	New York, N. Y.	Manila, P. I.	General.	3,700	9,313
Stovler 4.	19	3	15	19	8	20	19	16	55	British.	Blue Star Line	450.0	58.0	20.6	Hull, England.	Vancouver, B. C.	Ballast.	8,336	5,404
Foresbank 4.	19	6	05	19	9	35	19	17	25	Norwegian.	Pet. Stor. & Fin. Corp.	408.3	55.3	17.0	Eltemere Pt., Eng.	Los Angeles, Calif.	Ballast.	6,466	4,336
Herbjorn 4.	19	10	00	19	10	25	19	19	30	British.	Bank Line, Ltd.	420.0	53.9	25.4	Pt. Tampa, Fla.	Shanghai, China.	Ballast.	7,931	7,097
Balboa 4.	19	2	20	19	11	05	19	19	34	Norwegian.	Sigard Herlofson.	441.0	59.2	26.0	Caracao, D. W. I.	Balboa, C. Z.	Gas oil.	10,917	8,085
Naranta 4.	19	6	40	19	12	30	19	21	23	Swedish.	Johnson Line	426.0	56.0	20.1	Stockholm, Sweden	Vancouver, B. C.	General.	3,357	7,450
Sean 3.	19	6	40	19	12	30	19	20	17	British.	Royal Mail S. S. P. Co.	450.0	58.0	18.0	Rotterdam, Holland	Los Angeles, Calif.	Ballast.	8,856	6,559
Balle 4.	19	1	40	19	23	50	20	9	41	American.	U. S. Navy	180.0	35.6		Cristobal, C. Z.	Balboa, C. Z.	Ballast.	3,108	7,322
Chateau	19	7	00	20	1	10	20	10	57	Dutch.	Royal Neth. S. S. Co.	402.0	58.0	21.10	Hamburg, Germany	Corral, Chile.	Ballast.	537	4,798
Thierry 3.	19	15	20	20	2	45	20	10	20	American.	U. S. Army	436.9	58.2	25.10	New York, N. Y.	Honolulu, T. H.	General.	3,500	7,286
Amasa	20	12	20	20	4	10	20	14	01	German.	Hamburg-American Line	438.4	55.2	23.4	Hamburg, Germany	Valparaiso, Chile.	General.	969	6,809
Gracia	20	12	20	20	4	10	20	14	57	British.	Donaldson Brothers.	415.6	54.0	23.3	Glensburg, Scotland	Vancouver, B. C.	General.	12,514	8,427
Australia 4.	20	1	40	20	5	50	20	15	41	American.	The Texas Co.	509.7	70.3	23.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	7,720	5,015
Aerworld 4.	20	5	45	20	6	25	20	16	43	American.	Richfield Oil Co.	429.0	59.2	16.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	7,720	5,015
Houston 6.	20	7	00	20	7	45	20	16	23	American.	U. S. Navy	555.0	65.0	23.1	New York, N. Y.	Los Angeles, Calif.	Ballast.	6,690	7,780
Challenger 4.	20	6	20	20	8	30	20	17	17	American.	Norton, Lilly & Co.	410.0	56.0	25.0	Baltimore, Md.	Seattle, Wash.	General, steel, tin	6,690	7,780
Penelope 4.	20	3	45	20	9	45	20	18	15	Danish.	W. Tankerschiff Rhederei	470.0	63.0	23.7	New York, N. Y.	Talara, Peru.	Ballast.	9,302	6,127
S-15 4.	20	9	45	20	10	20	20	20	10	American.	U. S. Navy	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.	2,203	7,107
Pennsylvania.	20	9	45	20	10	30	20	18	25	American.	Amer-Hawaiian Line	407.7	53.7	19.0	Boston, Mass.	Seattle, Wash.	General.	5,123	9,331
Port Pirie.	20	8	45	20	11	30	20	20	32	British.	Com'th & Dom. Line.	470.1	58.4	26.2	New York, N. Y.	Dunedin, N. Z.	General, asphalt.	6,151	4,459
Lackenby.	20	8	45	20	12	30	20	20	30	British.	W. L. Comyn & Co.	412.1	54.2	16.6	Newcastle, England	Vancouver, B. C.	Ballast.	4,769	10,267
Vancouver.	20	9	30	21	1	35	21	9	46	German.	Hamburg-American Line	477.0	63.0	23.0	Hamburg, Germany	Vancouver, B. C.	General.	6,513	4,724
Emilie L. D.	20	18	35	21	3	10	21	11	37	French.	Louis Dreyfus & Co.	400.0	52.9	15.0	Norfolk, Va.	Puget Sound, Wash.	Ballast.	6,952	5,005
Jersey City.	20	22	40	21	4	40	21	12	51	British.	Sir W. R. Smith & Sons	411.6	55.0	16.0	N. Shields, England	Vancouver, B. C.	Ballast.	6,952	5,005
Paul	21	5	45	21	6	35	21	14	33	American.	Luckenbach Line	471.1	59.2	20.7	Boston, Mass.	Tacoma, Wash.	General.	2,881	9,027
Luckenbach.	21	7	50	21	8	25	21	15	49	American.	Luckenbach Line	425.0	57.3	23.0	Houston, Tex.	Olympia, Wash.	General.	5,323	8,508
Edgar F.	21	7	50	21	8	25	21	15	49	American.	Luckenbach Line	425.0	57.3	23.0	Houston, Tex.	Olympia, Wash.	General.	5,323	8,508

1 Tanker. 2 Submarine. 3 Transport. 4 Motor ship. 5 Minesweeper. 6 Cruiser. 7 Cotton and phosphates. 8 General, cement, and iron.

Durazzo.....	9	23-50	21	9-20	21	16-41	21	20-50	German.....	Hamburg-American Line	227.0	34.0	13.2	Cristobal, C. Z.	Guayaquil, Ecuador	General.....	125	1,633	1,041
Gibraltar.....	21	10-00	21	10-10	21	17-34	21	18-38	British.....	Dupont Co.	355.0	51.0	14.3	Norfolk, Va.	Inouque, Chile.	Ballast.....	4,770	3,468	
Tairoa.....	21	2-35	21	11-10	21	19-22	21	20-20	British.....	Shaw, Savill & Albion.	478.0	62.0	27.6	Antwerp, Belgium.	New Plymouth, N.Z.	Base slag.....	5,942	1,192	8,149
Muscaten.....	20	19-35	21	12-45	21	20-16	21	21-18	British.....	T. & J. Harrison.	335.0	52.0	14.6	Liverpool, England	Vancouver, B. C.	Ballast.....	5,212	3,578	
Chelsa.....	21	10-35	21	10-17	21	10-17	21	11-15	Panamanian.....	M. D. Joly	500.0	68.1	23.0	Cristobal, C. Z.	Gatun, C. Z.	Unknown.....	1	1	1
California.....	22	14-30	22	00-50	22	9-52	22	12-45	American.....	The Texas Co.	410.0	54.0	20.8	Pt. Arthur, Tex.	Wilmington, Calif.	Fuel oil.....	10,019	10,853	8,272
Hollywood.....	22	00-25	22	2-45	22	10-33	22	11-15	American.....	McCormick S. S. Co.	500.0	60.0	23.0	La Plata, Argentina	Los Angeles, Calif.	General.....	3,790	6,554	5,030
Penrith.....	22	6-10	22	6-45	22	13-00	22	14-05	British.....	Barber S. S. Line.	404.0	54.0	20.0	Philadelphia, Pa.	Osaka, Japan.	General.....	4,912	8,859	6,094
Castle.....	22	13-30	22	13-15	22	20-39	22	21-48	British.....	Pacific Steam Nav. Co.	215.0	33.0	15.7	Cristobal, C. Z.	Champerico, Guat.	General.....	973	1,270	735
Sancti Maria.....	22	25-40	22	16-00	22	22-21	22	9-58	American.....	Grace Line.	466.0	64.0	25.0	New York, N. Y.	Talcahuano, Chile.	General.....	4,179	10,626	6,680
Westerdijk.....	22	17-50	23	0-55	23	9-37	23	10-29	Dutch.....	Holland-America Line.	490.0	64.0	25.0	Rotterdam, Holland	Vancouver, B. C.	General.....	1,743	11,721	8,351
Damen Sun.....	22	17-50	23	2-45	23	23-05	23	12-05	American.....	Sun Oil Co.	480.0	66.0	22.6	New York, N. Y.	Los Angeles, Calif.	Ballast.....	9,607	6,551	
Point Reyes.....	22	21-10	23	4-20	23	12-54	23	14-00	American.....	Gulf-Pacific Line.	324.0	46.2	18.1	Houston, Tex.	Vancouver, B. C.	General.....	3,663	3,984	2,617
La Parla.....	20	19-00	23	4-20	23	15-50	23	16-00	American.....	United Fruit Co.	325.2	48.1	21.7	Cristobal, C. Z.	San Francisco, Cal.	Ballast.....	4,033	2,261	
President.....	23	1-20	23	6-25	23	14-03	23	21-25	American.....	Dollar Line.	502.0	62.2	24.0	New York, N. Y.	Round the world	General.....	2,788	12,073	8,495
Van Buren.....	23	0-65	23	7-35	23	15-16	24	1-58	American.....	Panama-Pacific Line.	586.4	80.3	27.3	New York, N. Y.	San Francisco, Cal.	General.....	2,840	25,354	18,170
Virginia.....	23	7-25	23	8-30	23	17-00	23	18-05	Norwegian.....	Isbrandt & Moller.	337.4	51.1	21.0	Baltimore, Md.	Manila, P. I.	General.....	4,809	9,179	3,761
Egle.....	23	4-05	23	10-40	23	17-48	23	18-55	American.....	Inter. Freightng Corp.	411.0	54.1	20.6	Baltimore, Md.	Antofagasta, Chile.	General, steel.....	3,688	6,679	4,973
Chilop.....	23	16-45	23	21-55	24	9-20	24	10-23	British.....	Union Cold Storage.	420.0	54.0	19.0	Tyne, England.	Seattle, Wash.	Ballast.....	7,321	5,832	
Gothestar.....	23	16-45	23	23-30	24	10-15	24	11-14	American.....	Tidewater Oil Co.	480.0	66.0	24.0	Chester, Pa.	Los Angeles, Calif.	Ballast.....	9,734	6,349	
Tidewater *.....	23	18-00	24	2-45	24	11-29	24	12-35	British.....	Can. Nat. Steamships.	400.0	52.0	16.0	St. John, N. B.	Vancouver, B. C.	General.....	1,117	5,858	4,108
Canadian.....	23	20-20	24	4-05	24	12-53	24	14-05	British.....	Reardon Smith Line.	416.0	55.0	15.0	Liverpool, England	Vancouver, B. C.	Ballast.....	7,272	5,494	
Vancouver.....	23	21-40	24	5-40	24	14-07	24	15-15	American.....	Calmar S. S. Corp.	409.8	54.2	18.0	Baltimore, Md.	Seattle, Wash.	Steel, general.....	2,824	6,581	4,785
Portmar.....	24	1-15	24	6-35	24	15-05	24	16-15	American.....	McCormick S. S. Co.	401.4	53.2	19.0	Baltimore, Md.	Seattle, Wash.	General.....	3,200	7,082	5,167
Chus. R.....	24	3-00	24	7-35	24	15-45	24	16-55	British.....	Inter. Freightng Corp.	412.0	56.0	16.0	Norfolk, Va.	Tocopilla, Chile.	Ballast.....	6,554	4,633	
Granley Hall.....	24	6-15	24	8-30	24	16-30	24	17-35	American.....	The Texas Co.	417.0	56.0	20.0	Port Arthur, Tex.	Los Angeles, Calif.	Ballast.....	6,925	4,982	
New Jersey.....	24	6-15	24	9-30	24	17-42	25	10-18	British.....	Com'lth & Dom. Line.	477.3	63.2	21.0	London, England.	Bluff, N. Z.	General.....	3,560	10,684	7,796
Port Alma.....	24	22-25	24	14-30	24	22-45	24	23-48	British.....	Pacific Steam Nav. Co.	303.0	43.0	18.0	New York, N. Y.	Tocopilla, Chile.	General.....	922	2,826	1,770
Almagro.....	24	13-03	24	14-30	24	22-40	25	1-40	American.....	Williams S. S. Line.	409.0	54.0	16.0	Baltimore, Md.	Seattle, Wash.	General.....	1,418	6,821	4,927
San Felipe.....	24	13-20	24	15-30	24	22-40	25	1-40	British.....	Atlante Reining Co.	385.2	51.0	19.0	Philadelphia, Pa.	La Libertad, Ecua.	Ballast.....	4,851	3,326	
El Lobo.....	24	13-20	24	14-30	25	9-12	25	10-24	British.....										

* Tanker.

° Launch.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Chilore.....	16	10-30	18	6-16	18	17-20	18	17-20	American.....	Ore S. S. Corp.	549.6	72.2	35.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore.....	21,000	14,538	4,480
Ranoke.....	17	23-30	18	0-43	18	18-00	18	15-30	American.....	The Texas Co.	418.8	56.1	26.0	San Diego, Calif.	Marcus Hook, Pa.	Gasoline.....	8,323	6,331	4,999
Camden.....	18	2-00	18	7-47	18	18-30	18	18-30	American.....	U. S. Navy	339.2	48.0	21.0	San Diego, Calif.	Philadelphia, Pa.	Tender.....			
Chewink.....	18	2-00	18	7-56	18	18-00	18	18-00	American.....	U. S. Navy	180.0	33.6		San Diego, Calif.	Cristobal, C. Z.	Ballast.....			
R-1.....	18	2-00	18	8-12	18	19-30	18	18-00	American.....	U. S. Navy	184.0	33.6		San Diego, Calif.	Coco Solo, C. Z.	Ballast.....			
R-2.....	18	2-00	18	8-12	18	19-30	18	18-00	American.....	U. S. Navy	184.0	33.6		San Diego, Calif.	Coco Solo, C. Z.	Ballast.....			
R-3.....	18	2-00	18	8-12	18	19-30	18	18-00	American.....	U. S. Navy	184.0	33.6		San Diego, Calif.	Coco Solo, C. Z.	Ballast.....			
R-4.....	18	2-00	18	8-24	18	19-36	18	18-00	American.....	U. S. Navy	184.0	33.6		San Diego, Calif.	Coco Solo, C. Z.	Ballast.....			
Archangelos.....	18	7-15	18	9-03	18	21-25	19	00-05	Greek.....	Anglo-Chilean Nit & Co.	400.5	52.0	26.0	Tocopilla, Chile.	Azores	Nitrate of soda.....	8,400	5,724	4,292
R-5.....	18	2-00	18	9-04	18	21-45	18	18-00	American.....	U. S. Navy	184.0	33.6		San Diego, Calif.	Coco Solo, C. Z.	Ballast.....			
R-6.....	18	2-00	18	9-04	18	21-45	18	18-00	American.....	U. S. Navy	184.0	33.6		San Diego, Calif.	Coco Solo, C. Z.	Ballast.....			
R-7.....	18	2-00	18	9-04	18	21-45	18	18-00	American.....	U. S. Navy	184.0	33.6		San Diego, Calif.	Coco Solo, C. Z.	Ballast.....			

* Tanker.

° Tug.

** Submarine.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
R-9 ^{1,2}	18	2,00	18	9,18	18	21,45	18	21,45	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
R-10 ^{1,2}	18	2,00	18	9,18	18	21,45	18	21,45	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
R-13 ^{1,2}	18	2,00	18	9,37	18	22,15	18	22,15	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
R-15 ^{1,2}	18	2,00	18	9,37	18	22,15	18	22,15	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
R-16 ^{1,2}	18	2,00	18	9,40	18	23,25	18	23,25	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
R-17 ^{1,2}	18	2,00	18	9,40	18	23,25	18	23,25	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
R-18 ^{1,2}	18	2,00	18	10,28	18	00,05	18	00,05	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
R-19 ^{1,2}	18	2,00	18	10,48	18	23,25	18	23,25	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
R-20 ^{1,2}	18	2,00	18	11,08	18	1,35	18	1,35	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
R-21 ^{1,2}	18	2,00	18	11,18	18	1,35	18	1,35	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
R-22 ^{1,2}	18	2,00	18	11,18	18	1,35	18	1,35	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
R-23 ^{1,2}	18	2,00	18	11,18	18	1,35	18	1,35	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
R-24 ^{1,2}	18	2,00	18	11,18	18	1,35	18	1,35	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
R-25 ^{1,2}	18	2,00	18	11,18	18	1,35	18	1,35	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
R-26 ^{1,2}	18	2,00	18	11,18	18	1,35	18	1,35	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
R-27 ^{1,2}	18	2,00	18	11,18	18	1,35	18	1,35	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
R-28 ^{1,2}	18	2,00	18	11,18	18	1,35	18	1,35	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
R-29 ^{1,2}	18	2,00	18	11,18	18	1,35	18	1,35	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
R-30 ^{1,2}	18	2,00	18	11,18	18	1,35	18	1,35	American	U. S. Navy	184.0	18.0	.....	San Diego, Calif.	Coco Solo, C. Z.	Ballast	.....	.....
Relay.....	8	21,45	18	11,27	19	3,20	19	3,20	American	All America Cables	240.0	32.0	17.0	Salina, Calif.	New York, N. Y.	Cable	1,291	675	
Call.....	18	9,00	18	12,45	19	3,35	19	3,35	German	Roland Line	216.5	32.9	12.0	Guisayhill, Emden	New York, N. Y.	General	460	1,195	
Voco ¹	18	14,00	18	15,04	19	5,05	19	5,05	British	Vacuum Oil Co., N. Y.	460.0	52.8	28.0	Estero Bay, Calif.	Wilhelmshaven, Ger.	Crude oil	11,945	9,174	
Lumina ¹	19	8,30	19	9,17	19	18,40	20	1,19	British	Anglo-Saxon Pet. Co.	407.6	52.3	25.0	San Francisco, Cal.	Lands End, Eng.	Gasoline	7,400	5,940	
Kenowis.....	16	7,30	19	13,18	19	21,00	19	21,00	American	U. S. Army	390.0	54.2	20.3	San Francisco, Cal.	New York, N. Y.	Army supplies	67	.....
Santa.....	19	11,05	19	14,04	19	22,20	20	1,55	American	Grace Line	480.0	64.0	22.2	Talcahuano, Chile	New York, N. Y.	(*)	2,982	10,687	
Barbara ^{1,2}	19	10,00	20	6,12	20	17,30	20	18,13	American	Panama-Pacific Line	586.4	80.3	30.0	San Francisco, Cal.	New York, N. Y.	General	4,802	25,262	
Pennsylvania.....	19	10,00	20	6,12	20	17,30	20	18,13	American	Panama-Pacific Line	586.4	80.3	30.0	San Francisco, Cal.	New York, N. Y.	General	4,802	25,262	
St. Mithel.....	19	10,00	20	6,43	20	18,20	21	11,00	American	U. S. Army	448.0	58.0	26.0	Bahoa, C. Z.	Brooklyn, N. Y.	Army supplies	600	4,033	
La Perla.....	19	14,45	20	7,19	20	19,00	.....	.....	American	United Fruit Co.	325.2	48.1	20.0	San Francisco, Cal.	Cristobal, C. Z.	Coffee, general	.....	.....
General M.....	20	3,30	20	8,39	20	19,55	20	21,10	American	Sudden & Christenson	402.6	53.0	27.0	Portland, Ore.	New York, N. Y.	Lumber	7,300	6,575	
Sherman.....	20	4,10	20	9,12	20	20,40	20	20,40	American	Amer-Hawaiian Line	407.7	53.7	24.3	Portland, Ore.	Boston, Mass.	Lumber	7,968	7,079	
Iowan.....	20	4,10	20	9,12	20	20,40	20	20,40	American	Amer-Hawaiian Line	407.7	53.7	24.3	Portland, Ore.	Boston, Mass.	Lumber	7,968	7,079	
Susan V.....	20	4,10	20	9,12	20	20,40	20	20,40	American	Amer-Hawaiian Line	407.7	53.7	24.3	Portland, Ore.	Boston, Mass.	Lumber	7,968	7,079	
Lukenbach.....	20	7,25	20	9,49	20	21,35	20	21,35	American	Lukenbach Line	434.3	57.7	27.0	Seattle, Wash.	Boston, Mass.	Lumber, general	6,847	7,947	
Saint Louis.....	20	11,40	20	12,25	20	23,10	21	12,19	French	French Line	415.0	50.3	25.3	San Antonio, Chile	Le Havre, France	Nitrates, copper	6,851	5,881	
Bradfyne.....	20	16,30	20	17,05	21	1,30	21	3,55	British	Sir W. R. Smith & Sons	400.0	54.3	25.0	Vancouver, B. C.	Cardiff, Wales	General	7,900	6,961	
Julia.....	20	16,30	20	17,05	21	1,30	21	3,55	British	Sir W. R. Smith & Sons	400.0	54.3	25.0	Vancouver, B. C.	Cardiff, Wales	General	7,900	6,961	
Lukenbach.....	20	17,00	20	17,47	21	2,30	21	2,30	American	Lukenbach Line	436.6	57.2	20.0	Portland, Ore.	Mobile, Ala.	General	2,508	8,543	
Vega.....	20	12,15	21	6,16	21	17,45	.....	.....	American	U. S. Navy	401.7	54.2	20.0	Mare Island, Calif.	Boston, Mass.	Navy supplies	2,785	.....
Teno.....	20	20,30	21	6,48	21	17,05	21	18,15	Chilean	Cia. Sud. Amer. de Vap.	421.8	56.0	25.0	Talcahuano, Chile	New York, N. Y.	General	2,720	7,764	
K. R.....	20	20,30	21	6,48	21	17,05	21	18,15	Chilean	Cia. Sud. Amer. de Vap.	421.8	56.0	25.0	Talcahuano, Chile	New York, N. Y.	General	2,720	7,764	
Kingsbury ¹	21	4,19	21	7,16	21	18,40	21	18,40	American	Standard Oil Co. of Cal.	440.0	58.2	29.0	Los Angeles, Calif.	Paulboro, N. J.	Gasoline	9,350	9,033	
Democracy ¹	21	2,30	21	8,41	21	19,30	21	19,30	American	Charles Nelson & Co.	377.0	50.0	25.0	Seattle, Wash.	Boston, Mass.	Lumber, general	6,000	5,434	
Lochgoil ^{1,2}	21	6,00	21	9,09	21	20,50	22	1,55	British	Royal Mail S. P. Co.	485.6	62.3	29.4	Vancouver, B. C.	Rottterdam, Holl'd.	General	9,130	10,503	

* For orders. ** Motor ship. *** Submarine.

† Tanker.

Ship	Date	Origin	Destination	Company	Notes									
Atlantic Sun	21	0 20	21	25	21	American	429.3	59.2	26.0	Miami, Fla.	Gasoline	9,225	5,467	5,283
Acme	21	8 45	21	10 35	21	22 05	21	23 45	American	Providence, R. I.	Light distillate	9,701	7,165	4,926
Empire Arrow	21	13 32	21	17 34	21	23 00	21	23 00	American	New York, N. Y.	Gasoline	11,286	9,841	6,946
Kwanai Maru	21	16 35	21	17 36	22	00 30	22	10 25	Japanese	Philadelphia, Pa.	General	4,740		
Santa	21	14 35	21	17 36	22	2 05	22	2 05	American	New York, N. Y.	Raw sugar, gen.	3,242	2,823	1,740
Glenora	22	00 05	22	6 43	22	14 55	22	14 55	British	Bridgetown, Barb.	Wheat	7,450	6,051	4,638
Gulding	22	9 50	22	10 45	22	20 15	22	20 15	Danish	Chenainis, B. C.	Lumber	7,222	6,736	5,064
Tai Yin	22	3 30	22	11 27	22	21 20	23	1 55	Norwegian	Davao, P. I.	General	4,341	9,977	9,063
Planet	22	8 50	22	12 37	22	23 40	23	9 12	German	Hamburg, Germany	General	8,848	7,400	5,245
Bennet	22	12 02	22	13 04	22	23 40	23	1 20	British	Middlesbrough, Eng.	General	7,770	6,562	4,745
Turkiah	22	23 22	23	6 20	23	14 30	23	14 30	British	Lyttelton, N. Z.	General	5,701	10,618	7,306
Sea Thrush	23	00 43	23	6 58	23	15 30	23	15 30	American	Boston, Mass.	Lumber, general	7,800	6,625	4,841
Chica	23	1 40	23	6 52	23	15 30	23	15 30	Colombian	Cristobal, C. Z.	General	1,889	2,962	1,161
Nebraska	23	1 34	23	6 27	23	16 24	23	16 20	American	Boston, Mass.	General	6,667	6,032	6,638
Amsterdam	23	9 00	23	8 23	23	18 24	24	00 40	Dutch	Hamburg, Germany	Nitrates, general	9,033	11,638	7,744
Cyprus	23	8 10	23	8 04	23	17 00	23	20 15	American	New Orleans, La.	Ballast	6,281	1,101	558
Nantawaky	23	9 25	23	10 19	23	19 10	23	19 10	American	Baltimore, Md.	Dark gas oil	6,298	6,205	4,339
Senando	23	24 00	23	12 56	23	21 24	24	7 15	British	Eltsenore, Pa., Eng.	Gasoline	9,203	7,012	5,022
Tutor Star	22	14 00	23	14 10	24	00 15	24	9 45	British	Newcastle, Eng.	Frozen, general	4,441		
Chattanooga	23	18 15	23	19 00	24	4 00	24	7 00	American	Baltimore, Md.	(**)	6,931	7,611	5,450
City	23	18 00	24	6 35	24	14 25	24	14 25	British	London, England	Frozen, general	5,227	11,911	8,945
Remuera	23	18 30	24	6 34	24	13 15	24	12 55	American	New York, N. Y.	General	3,786	5,726	5,056
Santa Teresa	24	2 25	24	7 13	24	20 04	24	21 57	American	New Orleans, La.	Beans, nitrates	4,727	3,978	2,500
Noss King	24	1 30	24	8 09	24	16 20	24	18 15	British	Liverpool, England	(**)	6,639	12,417	8,305
Oreona	24	3 20	24	9 29	24	30 40	24	20 40	American	Philadelphia, Pa.	Lumber, general	6,081	6,484	4,675
San Rafael	24	3 20	24	9 29	24	30 40	24	20 40	American	Boston, C. Z.	Ballast			
Swan	24	11 30	24	12 28	24	21 45	24	21 45	American	New Orleans, La.	General	2,754	5,667	4,103
Delight	24	14 50	24	16 10	25	3 10	25	13 30	Chilean	New York, N. Y.	Nitrates	6,375	6,478	4,530
Negada	24	16 05	24	16 53	25	1 30	25	13 45	American	Brooklyn, N. Y.	War Dept. gen.	423		
Cambrai	24	11 40	24	17 47	25	14 35	25	14 35	British	Halfax, N. S.	Crude oil	15,800	11,556	6,772

** Yacht.

** Tanker.

** Wheat, lumber, and general.

** Coffee, hides, and general.

** Lumber, paper, and pulp.

** Wool, cotton, copper, tin, etc.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Date	Vessel	ARRIVALS.		DEPARTURES.	
		From	Line	Date	Line
January 18	Ulun	United Fruit Co.	Line	January 18	Carinthia
January 18	Kungsholm	Swedish-American Line	Line	January 18	Republic
January 19	No. 9685	Pan American Airways	Line	January 18	No. 9670
January 19	Darton C-35	Scadta Airplane Co.	Line	January 18	No. 668-N
January 20	Costarica	Royal Netherlands S. Co.	Line	January 18	Ulun
January 20	Magdalena	Hamburg-American Line	Line	January 18	Cristobal
January 20	Pellerin de la Touche	French Line	Line	January 18	Parismirra
January 18	Ulun	United Fruit Co.	Line	January 18	Carinthia
January 18	Kungsholm	Swedish-American Line	Line	January 18	Republic
January 19	No. 9685	Pan American Airways	Line	January 18	No. 9670
January 19	Darton C-35	Scadta Airplane Co.	Line	January 18	No. 668-N
January 20	Costarica	Royal Netherlands S. Co.	Line	January 18	Ulun
January 20	Magdalena	Hamburg-American Line	Line	January 18	Cristobal
January 20	Pellerin de la Touche	French Line	Line	January 18	Parismirra

* Other than ships passing through the Canal.

* For

* Line

* Vessel

* Date

* From

* Line

* For

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	To—
January 20	No. 305-N ²¹	Pan American-Graec Airways	Talara via wayports.	January 19	August Physcen	Aluminium Line	Georgetown and waypts.
January 21	Zacapa	United Fruit Co.	New York via Kingston.	January 19	Kingsholm	Swedish-American Line	New York via waypts.
January 21	Sixola	United Fruit Co.	Colombia in port.	January 20	No. 145-M ²¹	Pan American Airways	Maracaibo via wayports.
January 21	Calamares	United Fruit Co.	New York via wayports.	January 20	Cost. Rica	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
January 21	Fiona	United Fruit Co.	New Orleans, La.	January 20	Magdalena	Hamburg-American Line	Port Limon, Costa Rica.
January 21	Inapaquina ²⁴	A. Tagaropoulos	Colon, Rep. of Panama.	January 21	No. 9664 ²¹	Pan American Airways	San Salvador and waypts.
January 18	Lt. Col. H. C. Schumm ²⁵	U. S. Army	Fort Monroe, Va.	January 21	No. 669-M ²¹	A. Tagaropoulos	Miami via wayports.
January 21	No. 670-M ²¹	Pan American Airways	Miami via wayports.	January 21	Inapaquina ²⁴	United Fruit Co.	Colon, Rep. of Panama.
January 21	No. 9670 ²¹	Pan American Airways	San Salvador and waypts.	January 21	Shakola	United Fruit Co.	New York via Kingston.
January 22	No. 145-M ²¹	Pan American Airways	Maracaibo via wayports.	January 22	Iriona	United Fruit Co.	Port Limon, Costa Rica.
January 23	La Emperatriz ²⁶	George Rivers	Bluefields, Nicaragua.	January 22	No. 144-M ²¹	Pan American Airways	La Guayra via wayports.
January 23	Atlantida	Standard Fruit & S. S. Co.	New Orleans via Habana.	January 22	Zacapa	United Fruit Co.	New York via wayports.
January 23	Bolivar	Colombia S. S. Line	Port Limon, Costa Rica.	January 22	Calamares	United Fruit Co.	Port Limon, Costa Rica.
January 23	Magdalena	Hamburg-American Line	New York via wayports.	January 22	Peliteridela Touche	French Line	Hayre via wayports.
January 24	Iriona	United Fruit Co.	Port Limon, Costa Rica.	January 23	No. 9685 ²¹	Pan American Airways	San Salvador and waypts.
January 24	Costarica	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	January 23	Darien C-35 ²¹	Scandia Airplane Co.	Cartagena & Barranquilla.
January 24	No. 144-M ²¹	Pan American Airways	La Guayra via wayports.	January 24	Iriona	United Fruit Co.	New Orleans and waypts.
January 24	No. 668-M ²¹	Pan American Airways	Talara via wayports.	January 24	Bolivar	Colombia S. S. Line	New York via wayports.
January 24	No. 945-M ²¹	Pan American Airways	Miami via wayports.	January 24	Atlantida	Standard Fruit & S. S. Co.	New Orleans and waypts.
January 24	No. 9664 ²¹	Pan American Airways	San Salvador and waypts.	January 24	Annetta I. ²⁴	A. Tagaropoulos	Colon, Rep. of Panama.
January 24	Cartago	United Fruit Co.	New Orleans and Habana.	January 24	La Emperatriz ²⁶	George Rivers	Bluefields, Nicaragua.
January 24	Annetta I. ²⁴	A. Tagaropoulos	Colon, Rep. of Panama.				

²¹ Air mail carrier. ²² Motor boat. ²³ Tug. ²⁴ Motor schooner.

PORT OF BALBOA.

January 21	White Shadow ^{27 28}	E. H. Norton.	Pearl Islands, R. P.	January 22	White Shadow ^{27 28}	E. H. Norton.	Guayaquil, Ecuador.
January 22	Satanta ²⁹	General Petroleum Co.	Los Angeles, Calif.	January 24	Satanta ²⁹	General Petroleum Co.	Los Angeles, Calif.
January 22	Sambu ²⁹	Hans Elliot.	Panama Bay, R. P.	January 24	Sambu ²⁹	Hans Elliot.	Panama Bay, R. P.
January 23	Bertha ²⁹	Hans Elliot.	Panama Bay, R. P.	January 24	Bertha ²⁹	Hans Elliot.	Panama Bay, R. P.
January 23	Hans Elliot.	Hans Elliot.	Panama Bay, R. P.	January 24	Real ²⁹	Hans Elliot.	Panama Bay, R. P.
January 23	El Libertador ²⁹	A. Valdez.	Panama Bay, R. P.	January 24	El Libertador ²⁹	A. Valdez.	Panama Bay, R. P.
January 23	Dos Hermanos ²⁹	A. Valdez.	Panama Bay, R. P.	January 23	Dos Hermanos ²⁹	A. Valdez.	Panama Bay, R. P.
January 24	Nueva Panama ²⁹	Hans Elliot.	Panama Bay, R. P.	January 23	Dos Hermanos ²⁹	A. Valdez.	Panama Bay, R. P.

²⁷ Tanker. ²⁸ Yacht. ²⁹ Motor ship. ³⁰ Motor schooner. * Other than ships passing through the Canal.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., February 4, 1931. No. 27.

Canal Traffic During January.

During the month of January, 1931, 476 commercial vessels and 3 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,108,140.42, and on the launches \$16.77, or a total tolls collection of \$2,108,157.19.

The daily average of commercial vessels was 15.35, and the average tolls collection was \$68,004.53, as compared with an average of 15.97 transits and \$70,728.51 in tolls for the previous month, and an average of 17.13 transits and \$76,135.84 in tolls for January, 1930. The average amount of tolls paid by each of the commercial transits was \$4,428.87, as compared with \$4,429.46 for the month of December, 1930. Last month's traffic was the lowest January traffic since January, 1927, when 443 commercial vessels, paying \$1,984,760.71 in tolls, were passed through the Canal.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 7 months of the current fiscal year, with the daily averages of transits and tolls, and the totals for the first 7 months of the fiscal years 1930 and 1929:

Month.	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July.....	488	\$2,180,511.82	15.74	\$70,339.09
August.....	465	2,080,230.42	15.00	67,104.21
September.....	458	2,057,103.58	15.26	68,570.12
October.....	517	2,283,982.08	16.68	73,838.13
November.....	479	2,098,357.36	15.96	69,945.25
December.....	495	2,192,583.85	15.97	70,728.51
January.....	476	2,108,140.42	15.35	68,004.53
Total, first 7 months of fiscal year, 1931.....	3,378	15,005,909.53	15.71	69,794.93
Total, first 7 months of fiscal year, 1930.....	3,733	16,188,845.40	17.36	75,296.95
Total, first 7 months of fiscal year, 1929.....	3,788	15,866,110.35	17.62	73,795.86

In comparison with the first 7 months of the fiscal year 1930, the corresponding period this year has had 355 fewer transits and \$1,182,935.87 less tolls, decreases of 9.5 per cent and 7.3 per cent respectively.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 24, 1931.

No. 836.

Colombia, Cartagena Approach, Fort San Fernando Light again regular. The following is quoted from Notice to Mariners No. 3, Washington, D. C., dated January 17, 1931:

The second officer of the Danzig steamer *Niobe* reports that on December 23, 1930, Fort San Fernando Light was observed to be functioning regularly as indicated in the light list.

Approximate position: Lat. 10° 19' 18" N., long. 75° 34' 00" W.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, January 31, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transi.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Colombo.....	24	6.35	25	6.00	25	13.37	25	14.30	Italian	Nav. Gen. Italiana.....	513.0	64.0	28.8	Genoa, Italy	Valparaiso, Chile	General	1,599	12,533	7,516
Caldas.....	16	15.35	23	5.55	23	13.37	25	16.57	Colombian	National Navigation Co.	116.0	21.1	8.10	Cristobal, C. Z.	Buenaventura, Col.	General	153	211	124
Boussole.....	24	13.45	23	6.45	25	14.20	25	15.30	French	Messageries Maritimes	364.8	52.0	22.4	Dunkirk, France	Noumes, New Cal.	General	3,596	5,504	3,681
Tashoo.....	24	16.40	23	7.35	25	15.49	25	16.55	American	Transatlantic S. S. Co.	324.0	54.0	16.0	Philadelphia, Pa.	Seattle, Wash.	General	1,400	3,984	2,628
Tolken.....	24	21.00	23	7.40	25	14.55	25	15.50	Swedish	Norwegian Line.....	378.0	54.0	14.0	Boston, Mass.	Los Angeles, Calif.	Ballast	6,225	4,535	
Colombian.....	24	9.35	23	9.50	25	17.21	25	18.25	American	Amer.-Hawaiian Line.	404.0	32.0	12.5	New York, N. Y.	Portland, Ore.	General	1,780	6,760	4,451
Call.....	19	3.35	23	10.30	25	17.51	25	19.03	German	Roland Line.....	216.0	32.0	12.5	Cristobal, C. Z.	Guayaquil, Ecuador	General	240	1,105	693
Carlier.....	25	13.05	25	14.25	26	21.48	26	20.15	Belgian	Compagnie Mar. Belge	471.0	60.8	17.0	Antwerp, Belgium	Seattle, Wash.	Ballast	9,264	7,044	
Lebore.....	24	12.35	26	00.10	26	9.30	26	10.37	American	Ore S. S. Corp.	549.0	72.0	23.6	Baltimore, Md.	Cruz Grande, Chile	Ballast	11,325	4,635	
Riverton.....	25	15.55	26	1.45	26	10.12	26	11.10	British	R. Chapman & Son.	410.0	54.0	17.0	Tyne, England	Vancouver, B. C.	Ballast	5,761	4,129	
Nosa Prince.....	25	17.05	26	3.04	26	11.11	26	16.12	American	N. O. & S. S. Co.	324.0	46.2	17.8	New Orleans, La.	Talcahuano, Chile	General	1,142	3,933	2,570
Ferndis.....	25	20.25	26	3.05	26	13.35	26	15.39	Norwegian	Strange & Co.	385.3	55.0	16.6	New York, N. Y.	Victoria, B. C.	Ballast	7,611	4,859	
Steel Worker.....	25	23.35	26	4.49	26	15.14	26	16.12	American	Isthmian S. S. Line.	424.2	56.2	27.40	Baltimore, Md.	Shanghai, China	General, steel	7,381	6,615	5,497
Fushnell J.....	14	9.25	26	6.05	26	16.10			American	U. S. Navy	350.0	45.8		Hampton Rds., Va.	Balboa, C. Z.	Ballast			
S-22.....	14	9.45	26	6.25	26	16.18			American	U. S. Navy	219.3	20.8		Cristobal, C. Z.	Balboa, C. Z.	Ballast			
S-23.....	14	9.45	26	6.25	26	16.18			American	U. S. Navy	219.3	20.8		Cristobal, C. Z.	Balboa, C. Z.	Ballast			
Oak Branch.....	23	8.25	26	7.40	26	17.01	26	18.35	British	F. & W. Ritson.	385.0	49.8	20.3	London, England	Corral, Chile	General	3,016	5,209	4,035
S-12.....	13	13.30	26	9.25	26	17.38			American	U. S. Navy	231.0	21.10		Cristobal, C. Z.	Balboa, C. Z.	Ballast			
Engle No. 35.....	13	13.30	26	9.25	26	17.40			American	U. S. Navy	200.0	25.6		Hampton Rds., Va.	Balboa, C. Z.	Ballast			
Wield.....	26	9.50	26	10.05	26	18.25	26	21.00	German	North German Lloyd.	419.0	53.2	16.0	Bremen, Germany	Vancouver, B. C.	Ballast	7,816	5,755	
San Marcos.....	26	13.50	26	22.10	27	9.04	27	10.14	American	Quaker Line.	440.0	51.0	18.6	Houston, Tex.	Seattle, Wash.	General	2,655	6,753	4,895
Ferwood.....	26	14.25	26	23.45	27	10.04	27	11.05	Norwegian	Fern Line.	390.0	55.2	22.0	Oslo, Norway	Yokohama, Japan	General, cotton	6,495	6,840	4,973
Helfo.....	25	19.15	27	2.40	27	11.03	27	12.10	Norwegian	Panama Mail S. S. Co.	214.0	34.0	10.6	Cristobal, C. Z.	Acajutla, Salvador	Ballast	1,158	722	
Buenaventura.....	26	1.10	27	2.20	27	11.00	27	12.10	American	Panama R. S. S. Line.	251.0	43.0	13.0	New York, N. Y.	Guayaquil, Ecuador	General	218	2,873	1,776
Armadale.....	26	16.25	27	3.50	27	15.27	27	16.57	British	Australin-Amer. Line.	410.5	54.0	23.6	Freeport, Tex.	Melbourne, Aus. Ia.	General, sulphur	6,351	6,953	5,210
Silverbeech.....	26	16.45	27	6.50	27	15.23	27	19.51	British	Kerr S. S. Co.	425.6	53.0	16.0	Chester, Pa.	Calcutta, India	Ballast	2,639	8,225	5,039
Lisbon Maru.....	27	2.40	27	6.10	27	14.57	27	16.15	Japanese	Nippon Yusen Kaisha.	445.0	58.0	19.0	Baltimore, Md.	Kobe, Japan	General	964	6,995	5,042
Yonacibichi.....	27	4.30	27	7.55	27	16.25			American	Roosvelts S. S. Co., S. B.	401.8	56.1	15.6	Philadelphia, Pa.	Brisbane, Aus-tralia	General	2,639	8,225	5,039
Illinois.....	27	7.35	27	8.30	27	17.32	27	18.20	American	The Texas Co.	416.8	56.1	15.6	New York, N. Y.	Los Angeles, Calif.	Ballast	964	6,995	5,042
Rolling Stone.....	27	9.05	27	9.05	27	16.29			German	Robert Wilcox	48.0	11.0	20.11	Hamburg, Germany	Balboa, C. Z.	Ballast	3,334	7,196	4,956
Aachen.....	27	6.12	27	14.15	27	21.51	27	23.00	German	North German Lloyd.	431.0	56.0	20.11	Cristobal, C. Z.	Valparaiso, Chile	General	3,334	7,196	4,956
Swan.....	27	7.35	27	6.01	27	14.53			American	U. S. Navy	180.0	30.6		Cristobal, C. Z.	Balboa, C. Z.	Ballast			
Charles B.....	27	6.12	27	6.01	27	14.53			American	U. S. Navy	180.0	30.6		Cristobal, C. Z.	Balboa, C. Z.	Ballast			
Tokai Maru.....	27	15.05	28	00.45	28	9.63	28	9.58	Japanese	Osaka Shosen Kaisha.	445.0	65.0	24.2	Boston, Mass.	Shanghai, China	General	4,945	8,982	6,274
Charles D.....	27	11.10	28	2.00	28	10.10			American	Mexican Petroleum Co.	320.0	45.1	17.6	Aruba, D. W. I.	Balboa, C. Z.	Gasoline	2,445	3,225	2,235
Hurwood.....	28	00.45	28	3.33	28	11.41	28	12.40	American	Arrow Line	410.0	54.2	17.8	New York, N. Y.	Los Angeles, Calif.	General	2,775	6,603	4,982
Christenson.....	28	1.25	28	5.25	28	12.39	28	13.35	British	Inter. Freightling Co.	402.5	52.2	14.0	Norfolk, Va.	Tocopilla, Chile	Ballast	5,583	4,009	
Uganda.....	23	1.25	28	5.25	28	12.39	28	13.35	British	Inter. Freightling Co.	402.5	52.2	14.0	Norfolk, Va.	Tocopilla, Chile	Ballast	5,583	4,009	

* Tanker. † Sub-lander. ‡ Motor ship. § Patrol boat. ¶ Yacht. †† Minesweeper.

	27	6 10	28	14 11	28	22 50	American	Panama Mail S. S. Co.	380 0	48 7	24 2	New York, N. Y.	San Francisco, Cal.	1,720
Colombia	27	6 10	28	14 11	28	22 50	American	Panama Mail S. S. Co.	380 0	48 7	24 2	New York, N. Y.	San Francisco, Cal.	1,720
Ashville	28	6 05	28	15 01	28	15 53	American	U. S. Navy	225 0	41 0	18 6	Pto. Cabezas, Nic.	Balboa, C. Z.	4,281
Dakota	28	7 10	28	15 18	28	16 10	American	Amer-Hawaiian Line	407 7	53 7	18 6	Boston, Mass.	Seattle, Wash.	5,094
Herac	28	7 05	28	16 28	28	16 35	American	Lockenbach Line	445 0	58 0	19 6	Boston, Mass.	Seattle, Wash.	3,138
América	28	5 10	28	18 07	28	18 10	Swedish	Ore S. S. Corp.	561 0	72 0	25 0	New York, N. Y.	Crux Grande, Chile	6,363
Salario	28	21 05	28	14 10	28	21 15	British	Donaldson Brothers	425 0	56 0	17 0	Glasgow, Scotlnd.	Vancouver, B. C.	15,560
Willmota	28	18 00	29	2 05	29	11 03	American	Dimon S. S. Corp.	330 0	54 0	19 0	Philadelphia, Pa.	Vancouver, B. C.	837
Theodore	28	23 45	29	4 05	29	11 50	Norwegian	Fred Olsen & Co.	435 5	55 2	27 2	Antwerp, Belgium	Vancouver, B. C.	3,000
Atlantic	28	4 20	29	5 40	29	13 20	American	Argonaut S. S. Line	410 5	54 3	21 0	Baltimore, Md.	Vancouver, B. C.	7,593
Dunzannon	29	00 25	29	6 40	29	14 15	American	The Texas Co.	435 0	56 0	21 0	New York, N. Y.	Vancouver, B. C.	6,567
Peter Kerr	28	6 25	29	7 20	29	15 08	American	States S. S. Co.	415 0	56 0	19 0	Manchester, Eng.	Vancouver, B. C.	7,638
Saint Joseph	28	14 55	29	11 10	29	18 14	French	French Line	398 0	50 3	18 0	Provence, France	Vancouver, B. C.	7,701
Henry D.	29	20 30	30	00 30	30	19 00	American	Union Sulphur Co.	356 0	51 8	25 0	Providence, R. I.	Seattle, Wash.	5,696
Whiton	29	20 30	30	30 30	30	18 36	American	Shepard S. S. Co.	409 8	54 2	24 0	Philadelphia, Pa.	Seattle, Wash.	5,367
Sage Brush	30	3 55	30	4 15	30	13 57	Japanese	Kokusai Kisen Kaisha	385 0	51 0	19 0	St. Johns, N. B.	Shanghai, China	6,602
Kinkyo Maru	30	2 05	30	4 40	30	14 58	German	Anzo-Saxon Pet. Co.	413 1	52 6	18 3	Hamburg, Germany	Los Angeles, Calif.	9,919
India	30	0 50	30	6 25	30	17 30	British	DuPont & Co.	402 0	52 2	15 0	Norfolk, Va.	Toeopili, Chile	1,169
Esle No 58	18	13 30	30	6 45	30	17 27	American	U. S. Navy	200 0	25 6		Hampton Rds., Va.	Balboa, C. Z.	5,634
Bessmer City	30	7 45	30	7 55	30	17 40	American	Isthmian S. S. Lines	424 0	56 0	24 0	Mobil, Ala.	Honolulu, T. H.	7,611
Banglata	30	8 15	30	8 30	30	19 00	British	N. Z. Shipping Co.	531 0	70 0	29 6	London, England	Wellington, N. Z.	5,450
Caucha	23	10 55	30	10 40	30	18 52	Colombian	National Navigation Co.	107 0	22 0	9 3	Cristobal, C. Z.	Buenaventura, Col.	13,500
Seitido	30	10 55	31	1 25	31	11 57	German	Hamburg-America Line	461 0	61 8	21 6	Hamburg, Germany	Portland, Ore.	8,831
Syria	30	14 05	31	4 00	31	12 27	German	Hamburg-America Line	309 6	44 1	18 6	Hamburg, Germany	Champerio, Guat.	9,267
Santa Inez	30	16 05	31	3 55	31	11 49	American	Grace Line	370 0	53 0	20 5	New York, N. Y.	Valparaiso, Chile	3,250
Toten	30	14 40	31	6 00	31	13 26	Chilean	Cia. Sud. Amor. de Vap.	421 0	56 0	16 2	New York, N. Y.	Valparaiso, Chile	2,292
Australand	30	19 15	31	7 05	31	14 45	British	Amer-Australian Line	410 4	54 0	24 10	Freemont, Texas	Valparaiso, Chile	7,384
Scotia	17	16 50	31	8 25	31	15 13	American	U. S. Navy	149 3	30 0		Cristobal, C. Z.	Brisbane, Australi.	5,155
Carro	27	14 10	31	8 35	31	16 23	German	Hamburg-America Line	237 0	34 4	13 4	Cristobal, C. Z.	Balboa, C. Z.	1,572
San Jose	27	14 10	31	9 40	31	17 30	American	United Fruit Co.	330 0	45 0	18 0	Cristobal, C. Z.	Guantanamo, Cuba	1,011
Acandija	27	12 31	31	10 30	31	18 50	British	Pacific Fruit, N. Y. Co.	216 0	33 0	13 6	Cristobal, C. Z.	San Francisco, Cal.	3,350
Pacific Trader	31	12 31	31	13 30	31	21 25		Furness, Withy & Co.	420 0	58 0	18 0	Glasgow, Scotland	Champerio, Guat.	7,700

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

	24	21 00	25	6 08	25	15 30	American <th>Tidewater Oil Co. <th>430 0</th> <th>59 2</th> <th>25 0</th> <th>Los Angeles, Calif.</th> <th>New York, N. Y.</th> <th>8,543</th> </th>	Tidewater Oil Co. <th>430 0</th> <th>59 2</th> <th>25 0</th> <th>Los Angeles, Calif.</th> <th>New York, N. Y.</th> <th>8,543</th>	430 0	59 2	25 0	Los Angeles, Calif.	New York, N. Y.	8,543
David McKelvy	24	21 00	25	6 08	25	15 30	American	Tidewater Oil Co.	430 0	59 2	25 0	Los Angeles, Calif.	New York, N. Y.	8,543
Forbes	24	21 50	25	6 18	25	18 45	American	Munson, McCorkle Line	409 8	54 2	30 0	St. Helens, Ore.	Baltimore, Md.	7,629
Hauptman	25	7 30	25	18 15	25	18 45	American	Panama Mail S. S. Co.	214 2	34 3	15 0	Champerio, Guat.	Cristobal, C. Z.	4,969
Heilo	25	13 30	26	6 15	26	16 10	British	Curacao Petrol-Ind. Co.	427 0	53 3	24 0	Pr. San Luis, Calif.	Curacao, D. W. I.	1,881
Patrolia	25	19 00	26	6 24	26	15 35	British	Shaw, Savill & Albion	483 0	64 2	26 0	Townsville, Aus. Ina.	London, England	6,319
Karamea	25	21 30	26	7 04	26	16 45	German	North German Lloyd	520 8	63 4	27 0	Bremen, Germany	London, England	8,373
Donau	25	2 00	26	8 01	26	17 20	Norwegian	Fern Line	382 7	53 4	26 3	Vald'ok U. S. S. R.	Copenhagen, Den.	11,007
Skranstad	26	2 00	26	9 09	26	18 35	British	Royal Mail S. P. Co.	450 2	58 3	25 2	Vancouver, B. C.	Copenhagen, Den.	6,698
Nietheroy	26	3 30	26	9 09	26	18 35	British	Arrow Line	450 2	58 3	25 2	Vancouver, B. C.	Antwerp, Belgium	4,236
Eleanor	26	4 30	26	10 17	27	13 30	American	Arrow Line	410 5	54 3	24 4	Everett, Wash.	Baltimore, Md.	8,874
Christensson	26	4 30	26	10 17	27	13 30	American	Arrow Line	410 5	54 3	24 4	Everett, Wash.	Baltimore, Md.	5,558

☉ Coffee, hides, and dyewoods.

☉ Motor ship.

☉ Tanker.

☉ Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Salt		From—	For—	Cargo.		Panama Canal tonnage.	
	Day	Hour	Day	Hour	Day	Hour	Day	Hour				Nature.	Tons			Cross.	Net.		
Texmar	26	7 00	26	10 49	26	20 40	26	20 40	American.	Calmar S. S. Corp.	410 5	54 3	25 0	Portland, Oreg.	Baltimore, Md.	Lumber	7,588	6,567	4,909
Amerika	26	12 40	26	13 23	26	22 20	27	3 15	Danish.	East Asiatic Co.	465 4	62 2	28 4	Vancouver, B. C.	Newcastle, Eng.	General	8,321	11,060	5,076
Willbro	26	19 10	26	20 00	27	4 10	27	4 10	American.	Williams S. S. Corp.	414 7	55 7	26 0	Seattle, Wash.	Baltimore, Md.	Lumber, general	9,188	7,717	5,763
San Jose	26	14 55	27	6 32	27	14 15	27	15 35	American.	United Fruit Co.	330 0	46 4	17 0	San Francisco, Cal.	Cristobal, C. Z.	(17)	528	3,675	2,359
Antietan	26	13 15	27	6 34	27	15 35	27	15 35	American.	Shell Eastern Pet. Prod.	433 6	56 2	27 3	Los Angeles, Calif.	Seawater, N. J.	Gasoline	9,645	7,426	5,073
Exina	27	3 45	27	7 39	27	18 40	27	18 40	Norwegian.	Argo-Mexican Pet. Co.	408 4	55 1	26 0	Los Angeles, Calif.	Lizards, Eng.	Gasoline	7,810		
El Cervo	26	21 15	27	8 17	27	19 20	27	19 20	British.	Argo-Ecuador. Oilfields.	407 4	52 2	25 5	La Libertad, Ecua.	Philadelphia, Pa.	Crude oil	7,870	6,046	4,326
Pacific Redwood	27	5 00	27	9 12	27	20 15	27	20 15	American.	Dixon S. S. Corp.	409 6	54 2	25 0	Seattle, Wash.	Norfolk, Va.	Lumber, general	7,703	6,587	4,845
Acuña	27	6 00	27	9 39	27	21 12	27	21 12	British.	Pacific Steam Nav. Co.	215 7	33 5	14 0	Champerico, Guat.	Cristobal, C. Z.	(15)	368	1,273	706
Ruth Kellogg	27	12 45	27	13 54	27	22 25	27	22 25	American.	Kellogg S. S. Corp.	330 0	54 2	27 0	Manila, P. I.	New York, N. Y.	Coconut oil	6,600	6,205	4,284
Pacific	27	13 15	27	14 16	27	23 00	27	23 00	British.	Furness, Withy & Co.	455 9	60 2	28 0	Vancouver, B. C.	London, England.	General	8,162	9,633	6,998
Exporteur	27	17 35	27	18 35	28	2 30	28	2 30	Italian.	Nav. Gen. Italiana	505 9	61 8	24 0	Valparaiso, Chile.	Genoa, Italy	General	2,286	12,977	9,373
Orazio	28	9 30	28	10 15	28	18 00	28	19 45	Norwegian.	East Asiatic Co.	368 0	51 5	24 3	Vald'ok, U.S.S.R.	Stettin, Germany	Soya beans	6,325	5,423	4,010
Edward	28	1 40	28	11 53	28	20 00	28	20 00	American.	Luckenbach Line.	436 6	57 2	30 0	Seattle, Wash.	Boston, Mass.	General, lumber	8,367	8,543	6,427
Manzales	28	13 55	28	14 41	28	21 40	28	21 40	German.	Roland Line	216 5	32 9	15 0	Guayaquil, Ecuador	Cristobal, C. Z.	General	587	1,132	741
Bernbr	28	13 55	28	14 50	28	22 50	29	2 15	British.	L. A. Scales, Ltd.	429 0	53 9	20 0	Pt. Pirie, Australia.	London, England.	Ore, wood	4,600	6,526	4,227
Wellington	28	17 15	28	18 25	29	2 00	29	9 30	British.	Com'l'th & Dom. Line.	470 1	60 4	27 0	Sydney, Australia.	London, England.	Frozen, general	7,169	9,774	7,612
Panaman	28	17 32	28	18 44	29	3 30	29	3 30	American.	Amer.-Hawaiian Line.	407 7	53 7	26 0	Portland, Oreg.	Boston, Mass.	General	6,638	7,097	5,065
Sheaf Holme	28	19 05	29	6 05	29	14 55	29	16 55	British.	Burns Philp & Co.	406 6	54 6	23 3	Rabat, N. Guinea	Marseilles, France	Copra, chrome ore	7,885	6,682	5,094
Pendolpe	29	4 15	29	6 14	29	15 50	29	15 50	Danish.	W. T. Jankshiff Rhederi.	470 1	63 2	27 3	Talara, Peru.	Hamburg, Germany	Gasoline	11,300	9,302	6,127
Sutherland	29	00 19	29	7 13	29	16 40	29	17 10	American.	Nelson S. S. Co.	380 0	53 2	24 0	Seattle, Wash.	New York, N. Y.	Lumber, general	5,910	5,654	4,123
S-15	29	10 14	29	17 25	29	17 25	29	17 25	American.	U. S. Navy	231 0	20 0		Balboa, C. Z.	Cristobal, C. Z.	Ballast			
S-16	29	10 14	29	17 25	29	17 25	29	17 25	American.	U. S. Navy	231 0	20 0		Balboa, C. Z.	Cristobal, C. Z.	Ballast			
San Antonio	29	9 30	29	10 55	29	19 00	30	12 10	French.	French Line.	431 0	57 2	24 0	Vancouver, B. C.	Bordeaux, France.	Lumber, general	5,570	7,771	4,650
Venezuela	28	19 45	29	12 20	29	20 05	30	12 05	American.	Panama Mail S. S. Co.	380 0	46 0	25 0	San Francisco, Cal.	New York, N. Y.	General	2,994	6,033	4,353
Comet	29	11 00	29	12 41	29	20 30	29	21 30	American.	Standard Oil Co., N. Y.	430 5	66 0	29 0	Los Angeles, Calif.	Boston, Mass.	Gasoline	13,000	9,820	6,777
Hegra	29	12 45	29	13 47	29	23 55	29	23 55	American.	Hegra S. S. Co.	440 0	56 0	28 0	Longview, Wash.	Newark, N. J.	Lumber	10,000	8,353	6,113
S-17	29	14 15	29	22 15	29	22 15	29	22 15	American.	U. S. Navy	231 0	20 0		Balboa, C. Z.	Cristobal, C. Z.	Ballast			
S-18	29	14 15	29	22 15	29	22 15	29	22 15	American.	U. S. Navy	231 0	20 0		Balboa, C. Z.	Cristobal, C. Z.	Ballast			
Henderson	29	16 00	30	6 21	30	15 00	30	22 00	American.	U. S. Navy	434 0	61 7	20 0	Balboa, C. Z.	Hampton Rds., Va.	Navy supplies	491		
Scio	30	6 32	30	6 32	30	16 35	31	7 05	American.	U. S. Navy	155 0	31 0		Balboa, C. Z.	Cristobal, C. Z.	Towing barge			
Point	30	6 00	30	7 00	30	15 20	30	15 20	American.	Atlantic Refining Co.	364 9	51 0	23 0	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline	5,705	5,113	3,571
Monique	29	11 35	30	7 50	30	16 35	30	16 35	French.	Desmarais Co.	425 8	56 7	26 4	Los Angeles, Calif.	Le Havre, France.	Gasoline	8,330	7,106	5,068
Pear-Branch	29	20 00	30	8 16	30	17 30	30	17 30	British.	F. & W. Ritson.	398 6	53 8	23 2	Coronel, Chile.	Liverpool, England	(19)	5,985	5,760	3,866
Swan No. 34	29	20 00	30	8 39	30	17 20	30	17 20	American.	U. S. Navy	187 0			Balboa, C. Z.	Cristobal, C. Z.	Ballast			

¹⁷ Nitrates, pot. per, and sugar.

¹⁸ Coffee, hides, and general.

¹⁹ Gasoline, kerosene, and general.

²⁰ For orders.

²¹ Tug.

²² Motor ship.

²³ Submarine.

²⁴ Tanker.

Ship	Company	Origin	Destination	Arrival	Departure	Remarks
Barrhin	British	30 00.30	30 18.25	30 18.25	30 18.25	
Buchanan	British	30 0.30	30 19.15	30 19.15	30 19.15	
Guayaquil	American	30 4.30	30 10.12	30 11.20	30 11.20	
Charles E.	American	30 10.40	30 20.30	30 20.30	30 20.30	
Harwood	American	30 8.00	30 11.15	30 20.55	30 20.55	
Arizona	American	30 10.00	30 13.16	30 22.25	30 22.25	
Albion Star	British	30 13.00	30 14.33	30 23.30	30 23.30	
Rotun	British	30 13.30	30 15.34	30 31.00	30 31.00	
Hendonhall	British	30 17.35	30 18.23	31 2.19	31 4.25	
Harneveld	Dutch	30 18.45	30 19.50	31 5.55	31 10.30	
Hindanger	Norwegian	30 21.55	31 7.09	31 14.45	31 17.25	
Boliver	Belgian	30 21.55	31 7.09	31 15.45	31 17.00	
Queen Maund	Spanish	30 23.00	31 7.31	31 18.15	31 19.10	
Sarantes	Spanish	31 1.58	31 8.25	31 20.10	31 20.10	
Yunter	American	31 5.00	31 8.25	31 19.10	31 19.10	
Cid.	British	31 5.00	31 8.25	31 19.10	31 19.10	
Luckenbach	American	31 11.15	31 11.57	31 20.50	31 20.50	
Sveti Vlaho	Yugoslav	31 11.20	31 12.27	31 21.45	31 21.45	

¹ Tanker. ² Wheat, lumber, and general. ³ Sugar, copra, and general. ⁴ Cocoa, coffee, bats, and rice. ⁵ Motor boat. ⁶ Schooner.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

ARRIVALS		DEPARTURES					
Date	Vessel	Line	From	Date	Vessel	Line	To
January 25	Duchess of Bedford	Canadian-Pacific Line	New York via waypoints.	January 25	No. 9670	Pan American Airways	San Salvador and waypoints.
January 25	Calanate	United Fruit Co.	Port Limon, Costa Rica.	January 25	No. 669-M	Pan American Airways	Miami via waypoints.
January 25	Darien C-35	Seadta Airplane Co.	Barranquilla and waypoints.	January 25	Costarica	Royal Netherlands S. S. Co.	Amsterdam and waypoints.
January 26	No. 9685	Pan American Airways	San Salvador and waypoints.	January 25	Calamares	United Fruit Co.	New York via Habana.
January 27	Austsvangen	Aluminum Line	New Orleans, La.	January 25	Cartago	United Fruit Co.	New Orleans and waypoints.
January 27	No. 306-N	Pan American-Grace Airways	Tahara via waypoints.	January 26	Magdalena	Hamburg-American Line	Hamburg via waypoints.
January 28	Ancon	Panama R. R. S. Line	New York via Haiti.	January 26	Duchess of Bedford	Canadian-Pacific Line	New York via waypoints.
January 28	Carare	Elders & Fyfes Line	Avonmouth via waypoints.	January 26	Agafia	R. Faguelopoulos	Colon, Rep. of Panama.
January 28	Tola	United Fruit Co.	New York via Kingston.	January 28	Inapauquina	Aluminum Line	Maracabo via Cartagena.
January 28	Santa Marta	United Fruit Co.	New Orleans, La.	January 28	Pan	Pan American Airways	San Salvador and waypoints.
January 28	Tela	United Fruit Co.	Colon, Rep. of Panama.	January 28	No. 9665-M	Pan American Airways	Miami via waypoints.
January 28	Inapauquina	A. Tagaropoulos	Boaumont, Tex.	January 29	Carare	Elders & Fyfes Line	Avonmouth via waypoints.
January 28	Tamaha	Standard Oil Co.	Miami via waypoints.	January 29	Tela	United Fruit Co.	Boes, Rep. of Panama.
January 29	No. 669-M	Pan American Airways	San Salvador and waypoints.	January 29	No. 144-M	Pan American Airways	La Guayra via waypoints.
January 29	Volendam	Holland-America Line	New York via waypoints.	January 29	Santa Marta	United Fruit Co.	New York via waypoints.
January 30	Amapal	Colombian S. S. Line	New Orleans and Habana.	January 29	Tola	United Fruit Co.	Port Limon, Costa Rica.
January 30	Buraco	G. I. Bryan	New York via waypoints.	January 29	Tamaha	Standard Oil Co.	Tampico, Mexico.
January 30	Pearl Marie	Colon, Rep. of Panama.	Boes, Rep. of Panama.	January 30	No. 9685	Pan American Airways	San Salvador and waypoints.
January 30	Tela	United Fruit Co.	La Guayra via waypoints.	January 30	Darien C-35	Seadta Airplane Co.	Barranquilla and waypoints.
January 31	No. 144-M	Pan American Airways	La Guayra via waypoints.	January 31	Tela	United Fruit Co.	New Orleans and waypoints.

¹ Air mail/currier. ² Motor boat. ³ Motor schooner. ⁴ Other than ships passing through the Canal. (Continued on page 392, column 2.)

Summary of Passenger Movement at the Canal During 1930.

During the calendar year 1930 the number of passengers disembarking at Canal Zone ports in termination of voyage aggregated 41,423, and the number embarking, or beginning a voyage, during the same period totaled 39,330. Approximately 55 per cent of both the arrivals and departures were carried as first class, and the remainder either as second, tourist, third, or steerage. These figures do not include passengers merely calling at the Canal, that is, arriving and departing on the same ship.

The following tabulation shows by months, the number of passengers disembarking and embarking at Canal Zone ports during the calendar year 1930, segregated as between first class and "others," with comparative totals for the calendar years 1929 and 1928:

	Disembarking.			Embarking.		
	First class.	Others.	Total.	First class.	Others.	Total.
January.....	2,154	1,334	3,488	1,638	1,280	2,918
February.....	2,006	1,644	3,650	1,742	1,120	2,862
March.....	1,935	1,980	3,965	2,204	1,753	4,017
April.....	1,833	2,297	4,130	1,889	1,423	3,312
May.....	1,596	1,121	2,717	2,231	1,537	3,768
June.....	1,906	1,468	3,374	2,116	1,620	3,736
July.....	2,017	1,417	3,434	2,049	1,363	3,412
August.....	1,842	1,741	3,583	1,956	1,787	3,743
September.....	1,959	1,509	3,468	1,640	1,605	3,245
October.....	1,980	1,539	3,519	1,409	1,700	3,109
November.....	1,550	1,164	2,714	1,318	1,524	2,842
December.....	1,923	1,458	3,381	1,228	1,138	2,366
Total, 1930.....	22,751	18,672	41,423	21,480	17,850	39,330
Total, 1929.....	25,736	20,597	46,333	25,677	18,982	44,659
Total, 1928.....	25,405	18,711	44,116	23,768	16,926	40,694

As compared with 1929, the calendar year 1930 shows a 10.6 per cent decrease in the total number of arrivals and a decrease of 11.9 per cent in the total number of departures.

During the past 3 calendar years approximately 75 per cent of the passenger movement to and from the Canal has been through the port of Cristobal as may be seen from the following tabulation in which the totals are given for the years 1928, 1929, and 1930:

	Port of Cristobal.			Port of Balboa.		
	1928*	1929.	1930.	1928.	1929.	1930.
Passengers disembarking.....	32,535	35,053	30,167	11,581	11,280	11,256
Passengers embarking.....	30,342	34,434	28,886	10,352	10,225	10,444

A further segregation of the passenger movement shows that 31,699 incoming and 28,582 outgoing passenger passengers were brought from and were destined to ports on the Atlantic, and 9,724 incoming and 10,748 outgoing passengers were brought from and were destined to ports on the Pacific.

TRANSIENT VISITORS.

In addition to the figures shown above of passengers embarking and disembarking, there were 209,527 passengers (115,089 at Cristobal and 94,438 at Balboa) brought to the Isthmus by vessels calling at Canal Zone ports during 1930. For the calendar year 1929, this number was 207,970. Most of these passengers came ashore for a period of from

24 to 48 hours, but as they departed on the same vessel on which they arrived, they are not taken up in the above tabulation. This group of 209,527 passengers is segregated as follows:

	Calendar year 1930.			Total.	
	Cristobal.	Balboa.	Total.	1929.	1928.
Remaining on board vessels transiting Canal.....	89,927	90,963	180,890	180,766	149,570
Remaining on board vessels entering port, but not transiting Canal.....	25,162	3,475	28,637	27,204	23,745
Total.....	115,089	94,438	209,527	207,970	173,315

Segregating those remaining on board vessels transiting the Canal according to direction of transit for the 3 calendar years shows the following:

	Calendar year.		
	1928.	1929.	1930.
En route from Atlantic to Pacific ports.....	86,399	104,723	103,083
En route from Pacific to Atlantic ports.....	63,171	76,043	77,807

The above represents the strictly passenger traffic passing through the Canal and to and from Canal Zone ports. To get the total number of arrivals and departures of individuals at Canal Zone ports during the year, it would be necessary to add the crews of 5,885 commercial vessels and 583 noncommercial vessels which transited the Canal during the year, as well as 1,023 vessels calling at the ports of Cristobal and Balboa during the year without transiting the Canal. In the aggregate the combined crews would considerably outnumber the passengers though, owing to the fact that many of the vessels made a number of calls, there would be considerable duplication in so far as the number of individuals was concerned in any figures compiled relative to crews.

Contract Awarded for Construction of New Panama Mail Vessels.

The Grace Steamship Company has announced that a contract for the construction of 4 twin-screw combination mail, passenger and cargo steamers for its Panama Mail Steamship Line's coast-to-coast service has been awarded to the Federal Shipbuilding & Drydock Company, for immediate construction at its plant at Kearney, N. J.

The new vessels are to be turbo-electric drive, of 9,000 gross tons, 16,600 tons displacement, 508 feet long, 72 feet beam, and 39 feet deep. They are to have a speed of 19 knots. Accommodations are to be provided for 222 first-class and 64 third-class passengers.

Among the special features of the new vessels is a promenade deck devoted exclusively to public accommodation, including dining room; on the promenade deck aft is to be an open-air "night club" with dance floor. The promenade will overlook an open-air sports deck connected with a gymnasium; in the middle of the sports deck will be a permanent swimming pool, 36 feet long, illuminated from the bottom.

The new vessels will replace the ships in the company's service between New York, Habana, Puerto Colombia, Cartagena, Cristobal, Balboa, west coast Central American ports, Mazatlan, Los Angeles, and San Francisco. The vessels at present engaged in the service are the *Colombia*, *Venezuela*, *Ecuador*, *El Salvador*, and *Guatemala*. Deliveries of the new ships are scheduled for 20, 22, 24, and 27 months.

Supplement No. 3—Tariff No. 10.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
BALBOA HEIGHTS, C. Z., January 27, 1931.

ITEM 42.—STORAGE AND CAR DEMURRAGE.
(Effective February 15, 1931.)

STORAGE.

1. Storage charges will be made on shipments remaining at the stations of origin or destination longer than 72 hours after notice of arrival, at the following rates:
 - (a) Freight, per 100 pounds per day of 24 hours, or fraction thereof \$0.03
(minimum charge \$0.25)
 - (b) Express and baggage, per package per week, or fraction thereof 25
2. Free time will begin the first 7 a. m. after notice of arrival is sent or given to consignee.
3. In computing time on freight shipments, Sundays and legal holidays on which the freight house is closed will be excluded from both free and chargeable time.

CAR DEMURRAGE.

4. Cars held for or by consignors or consignees for loading or unloading are subject to the following demurrage rules and charges:
 - (a) Free time allowed—
 - (1) One to 9 cars inclusive:
Seventy-two hours' (3 days) free time will be allowed for loading or unloading all commodities.
 - (2) Ten or more cars:
Seventy-two hours' (3 days) free time for the first 9 cars, plus 24 hours' (one day) free time for each additional group of 3 cars (or fraction thereof), will be allowed for loading or unloading all commodities.
 - (b) Computing time—
 - (1) On cars held for loading, time will be computed from the first 7 a. m. after placement, and without notice of placement.
 - (2) On cars held for unloading, time will be computed from the first 7 a. m. after placement, and after the day on which notice of arrival is sent or given to the consignee.
 - (3) In computing time, Sundays and legal holidays on which the freight house is closed will be excluded from both free and chargeable time.
 - (c) Demurrage charges—
 - (1) After the expiration of free time allowed, a charge of \$3 per car per day, or fraction of a day, will be made until car is released 3.00

H. BURGESS,
Governor, The Panama Canal,
President, Panama Railroad Company.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 24, 1931.

No. 837.

Panama, Gulf of Panama, Perlas Islands, Pedro Gonzales Island, shoal southward, nonexistence of shoal. The following is quoted from Notice to Mariners No. 3, Washington, D. C., dated January 17, 1931:

The commanding officer of the U. S. S. *Niagara* reports that as a result of sweeping operations in the vicinity of the Perlas Islands a shoal having a depth of 2 fathoms over it has been located 2 miles 264 degrees from Passage Rock.

Approximate position: Lat. 8° 20' 38" N., long. 79° 08' 45" W.

The 6-fathom shoal previously reported about 1,200 yards northward of the above position does not exist and will be expunged from the chart.

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending January 24, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Herbijorn	Anglo-Saxon Petroleum Co.	January 19 . . .	January 21 . . .	10,917	
Balboa	Johnson Line	January 19 . . .	January 19 . . .	1	
Santa Barbara	Grace Line	January 19 . . .	January 20 . . .	9	
La Perla	United Fruit Co.	January 19 . . .	January 20 . . .	101	
Vega	U. S. Navy	January 20 . . .	January 21 . . .	14	75
Brielle	Dutch Line	January 20 . . .	January 20 . . .	123	
Amasis	Hamburg-American Line	January 20 . . .	January 20 . . .	497	
Satanta	Standard Oil Co.	January 22 . . .	January 23 . . .	6,180	
Planet	Hamburg-American Line	January 22 . . .	January 22 . . .	38	
Tai Yin	Barber S. S. Line	January 22 . . .	January 22 . . .	225	
California	Texas Corporation	January 22 . . .	January 22 . . .	9,589	
Santa Maria	Grace Line	January 22 . . .	January 23 . . .	72	60
Virginia	Panama-Pacific Line	January 23 . . .	January 23 . . .		176
President Van Buren	Dollar Line	January 23 . . .	January 23 . . .	1	
Orcoma	Royal Mail S. P. Co.	January 24 . . .	January 24 . . .		1

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending January 31, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Parismina	United Fruit Co.		January 18.		9
August Thyssen	Aluminium Line		January 18.		2
Baralt	Royal Netherlands S. S. Co.		January 18.		83
Cristobal	Panama R. R. S. S. Line		January 18.		722
Ulua	United Fruit Co.	January 18.	January 18.	49	232
Brielle	Royal Netherlands S. S. Co.	January 19.	January 19.	240	64
Balboa	Johnson S. S. Line	January 19.	January 19.	101	55
Santa Barbara	Grace Line	January 19.	January 20.	184	102
Calif.	North German Lloyd	January 19.	January 19.	460	
Amasis	Hamburg-American Line	January 19.	January 20.	145	93
Costa Rica	Royal Netherlands S. S. Co.	January 20.	January 20.	22	(²)
Magdalena	Hamburg-American Line	January 20.	January 20.	52	(²)
Vancouver	Hamburg-American Line	January 20.	January 21.	15	54
Saint Louis	French Line	January 20.	January 21.	71	(²)
Musician	T. & J. Harrison	January 20.	January 21.	286	(²)
Pellerin de la Touche	French Line	January 20.	January 22.	81	243
La Perla	United Fruit Co.	January 20.	January 23.	712	(²)
Durazzo	Hamburg-American Line		January 21.		124
Sixto	United Fruit Co.	January 21.	January 21.		606
Zacapa	United Fruit Co.	January 21.	January 22.	448	303
Calamares	United Fruit Co.	January 21.	January 22.	496	
Irióna	United Fruit Co.	January 21.	January 22.	702	(²)
Lochgoil	Royal Mail Steam Packet Co.	January 21.	January 22.	1	132
Salvador	Pacific Steam Navigation Co.		January 22.		973½
Kwansai Maru	Osaka Shosen Kaisha	January 22.	January 22.	100	55
Tai Yin	Barber S. S. Line	January 22.	January 22.	198	(²)
Emperatriz	G. Rivers	January 22.		30	
Damstridijk	Holland-America Line	January 22.	January 23.	173	1½
Planet	Hamburg-American Line	January 22.	January 23.	123	(²)
Bolivar	Colombian S. S. Line	January 22.	January 24.	49	23
Magdalena	Hamburg-American Line	January 23.	January 22.	22	
Cauca	National Navigation Co.	January 23.		189	
Almagro	Pacific Steam Navigation Co.	January 23.	January 24.	29	320
Amsterdam	Royal Netherlands S. S. Co.	January 23.	January 24.	144	3
Atlantida	Standard Fruit & S. S. Co.	January 23.	January 24.	229	363
Santa Teresa	Grace Line	January 24.	January 24.	363	(²)
Cartago	United Fruit Co.	January 24.		4	
Irióna	United Fruit Co.	January 24.	January 24.	(²)	220
Costarica	Royal Netherlands S. S. Co.	January 24.		2	
Colombo	Italian S. S. Line	January 24.		310	
Oreoma	Pacific Steam Navigation Co.	January 24.	January 24.	6	(²)
Calif.	North German Lloyd		January 25.		240½
Cartago	United Fruit Co.		January 25.		4
Costarica	Royal Netherlands S. S. Co.		January 25.		250
Colombo	Italian S. S. Line		January 25.		102
Caldas	National Navigation Co.		January 25.		127
Calamares	United Fruit Co.	January 25.	January 25.	8	223
Nosa Prince	N. O. & S. A. S. S. Co.	January 25.	January 26.	161	120
Heilo	Panama Mail S. S. Co.	January 25.	January 27.	1,374	(²)
Magdalena	Hamburg-American Line		January 26.		756
San Marcos	Quaker S. S. Line	January 26.	January 26.	55	(²)
Donau	North German Lloyd	January 26.	January 26.	47	227
Nitheroy	Royal Mail Steam Packet Co.	January 26.	January 27.	(²)	95
Buenaventura	Parana Railroad S. S. Line	January 26.	January 27.	904	2
La Emperatriz	G. Rivers		January 27.		50
Sulairia	Donaldson S. S. Line	January 26.	January 28.	(²)	334
Archen	North German Lloyd	January 27.	January 27.	139	24
Colombia	Panama Mail S. S. Co.	January 27.	January 28.	205	491
Charles E. Harwood	Mexican Petroleum Co.	January 27.	January 28.	913	(²)
Austvangen	Aluminium Line	January 27.	January 28.	217	114
San José	United Fruit Co.	January 27.	January 31.	629	232
Acjutla	Pacific Steam Navigation Co.	January 27.	January 31.	367	305
Tela	United Fruit Co.	January 28.	January 28.	897	59
Tamaha	Standard Oil Co.	January 28.	January 29.	9,391	(²)
Orazio	Italian Line	January 28.	January 29.	22	606
Saint Joseph	French Line	January 28.	January 29.	25	61
Mamizales	North German Lloyd	January 28.		587	
Santa Marta	United Fruit Co.	January 28.	January 29.	413	256
Tolosa	United Fruit Co.	January 28.	January 29.	267	6
Aneon	Panama Railroad S. S. Line	January 28.		2,646	
Venezuel	Panama Mail S. S. Co.	January 29.	January 30.	629	(²)
San Antonio	French Line	January 29.	January 30.	34	110
Cauca	National Navigation Co.		January 30.		117
Santa Inez	Grace Line	January 30.	January 31.	103	261
Baracoa	United Fruit Co.	January 30.	January 31.	84½	30
Guayaquil	Parana Railroad S. S. Line	January 30.	January 31.	166	(²)
Seattle	Hamburg-American Line	January 30.	January 31.	92	66
Syra	Hamburg-American Line	January 30.	January 31.	312	261
Amapala	Standard Fruit & S. S. Co.	January 30.	January 31.	60	366

¹ No cargo discharged.

² No cargo laded.

³ One package.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Tela.....	United Fruit Co.....	January 31..	January 31..	6	183
Cerigo.....	Hamburg-American Line.....	January 31..	January 31..		163
Barneveld.....	Royal Netherlands S. S. Co.....	January 31..	January 31..	24	3
Cid.....	Pacific Steam Navigation Co.....	January 31..		367	

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective January 13, 1931.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb.	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulfritron Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulfritron No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulfritron, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.12
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 15 years of operation.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1931 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	From New York to Cristobal.			From Cristobal to New York.		
	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
<i>Ancon</i>	January 20...	January 25...	January 28...	February 1...	February 4...	February 9
<i>Cristobal</i>	February 3...	February 8...	February 11...	February 16...	February 19...	February 24.
<i>Ancon</i>	February 17...	February 22...	February 25...	March 1.....	March 4.....	March 9.
<i>Cristobal</i>	March 3.....	March 8.....	March 11.....	March 15.....	March 18.....	March 23.
<i>Ancon</i>	March 17.....	March 22.....	March 25.....	March 29.....	April 1.....	April 6.
<i>Cristobal</i>	March 31.....	April 5.....	April 8.....	April 12.....	April 15.....	April 20.
<i>Ancon</i>	April 14.....	April 19.....	April 22.....	April 26.....	April 29.....	May 4.
<i>Cristobal</i>	April 28.....	May 3.....	May 6.....	May 10.....	May 13.....	May 18.
<i>Ancon</i>	May 12.....	May 17.....	May 20.....	May 24.....	May 27.....	June 1.
<i>Cristobal</i>	May 26.....	May 31.....	June 3.....	June 7.....	June 10.....	June 15.
<i>Ancon</i>	June 9.....	June 14.....	June 17.....	June 21.....	June 24.....	June 29.
<i>Cristobal</i>	June 23.....	June 28.....	July 1.....	July 5.....	July 8.....	July 13.
<i>Ancon</i>	July 8.....	July 13.....	July 16.....	July 19.....	July 22.....	July 27.
<i>Cristobal</i>	July 21.....	July 26.....	July 29.....	August 2.....	August 5.....	August 10.
<i>Ancon</i>	August 4.....	August 9.....	August 12.....	August 16.....	August 19.....	August 24.
<i>Cristobal</i>	August 18.....	August 23.....	August 26.....	August 31.....	September 3.....	September 8.
<i>Ancon</i>	September 1.....	September 6.....	September 9.....	September 13.....	September 16.....	September 21.
<i>Cristobal</i>	September 15.....	September 20.....	September 23.....	September 27.....	September 30.....	October 5.
<i>Ancon</i>	September 29.....	October 4.....	October 7.....	October 11.....	October 14.....	October 19.
<i>Cristobal</i>	October 14.....	October 19.....	October 22.....	October 25.....	October 28.....	November 2.
<i>Ancon</i>	October 27.....	November 1.....	November 4.....	November 8.....	November 11.....	November 16.
<i>Cristobal</i>	November 10.....	November 15.....	November 18.....	November 22.....	November 25.....	November 30.
<i>Ancon</i>	November 24.....	November 29.....	December 2.....	December 6.....	December 9.....	December 14.
<i>Cristobal</i>	December 8.....	December 13.....	December 16.....	December 20.....	December 23.....	December 28.
<i>Ancon</i>	December 22.....	December 27.....	December 30.....	January 3.....	January 6.....	January 11.

* Effective April 28th, steamers sail daylight saving time.

* Due to discontinuance of the daylight saving time, departure of S. S. *Ancon*, September 29, will be at 4 p. m. standard time.

Steamers sail at 4 p. m. from Pier 65, North River, foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., February 11, 1931. No. 28.

United States Naval Vessels Arrive for Maneuvers.

The U. S. S. *Texas*, flagship of the United States Fleet, with commander-in-chief, Admiral J. V. Chase on board, arrived at Cristobal from Guantanamo Bay, Cuba, on February 6, 1931, and transited the Canal to Balboa the following day. The *Texas* was immediately followed in transit by the U. S. S. *Arkansas*, flagship of the Scouting Fleet, which fleet arrived also from Guantanamo Bay on February 7. The various other units of the Scouting Fleet transited the Canal on the 8th, 9th, and 10th, and proceeded to previously assigned berths in Balboa Harbor, or outer anchorage in Panama Bay.

After a few days' visit these vessels will depart into the Pacific to take up the defense of the Canal in maneuvers, against the simulated attack of the Battle Fleet, which has sailed from California waters. The combined fleets, consisting of approximately 150 vessels, manned by between 30,000 and 35,000 men, will be in Isthmian waters until about March 25.

The dirigible *Los Angeles* arrived over Balboa from Lakehurst, N. J., via Guantanamo, in the night of February 6, and is to be attached to the defending fleet.

Water Shipped to Curacao to Relieve Water Shortage.

The tank ship *Charles E. Harwood*, of the Pan-American Petroleum & Transportation Company, sailed from Cristobal on February 1, 1931, carrying as its cargo 1,500,000 gallons of drinking water destined to Curacao, Dutch West Indies, and the cargo steamer *Dorelian*, of the Leyland Line, sailed on February 8, 1931, with 252,270 gallons. The water, which was shipped in an attempt to relieve an acute water shortage in Curacao, was purchased by the Dutch Government from The Panama Canal. The water shipments will continue periodically until the condition is relieved. It is said that this is the first time in the history of Curacao that it has been found necessary to import water for drinking purposes.

Supplement No. 4—Tariff No. 10.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
BALBOA HEIGHTS, C. Z., February 7, 1931.

ITEM 41.—PANAMA RAILROAD COMPANY SWITCHING TARIFF.
(Effective February 15, 1931.)

Paragraph 2 is annulled and the following substituted:

2. For switching loaded cars from industrial or private tracks to yards for movement over the Panama Railroad, per switch (any number of cars)..... \$5.00

H. BURGESS,
Governor, The Panama Canal,
President, Panama Railroad Company.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, February 7, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Chile Maru	31	16.30	1	12.25	1	9.07	1	10.25	Japanese	Kokusa Kisen Kaisha.	385.0	51.0	14.0	Norfolk, Va.	Arica, Chile.	Ballast	5,923	4,409	
Dio	31	17.40	1	1.50	1	10.05	1	11.15	American	Gulf-Pac. Redwood Line	404.0	52.2	18.6	New Orleans, La.	Seattle, Wash.	Iron pipe, gen.	3,172	5,708	
Kansan	31	20.05	3	3.30	1	11.18	1	12.17	American	Amer-Hawaiian Line	381.0	53.0	16.0	Boston, Mass.	Portland, Ore.	General	2,413	6,779	
Gisla	1	1.05	1	5.05	1	14.22	1	13.50	Norwegian	McMillan Export Co.	360.5	51.0	13.6	Philadelphia, Pa.	Vancouver, B. C.	Ballast	5,101	3,735	
Northernor	1	5.15	1	6.35	1	14.22	1	20.30	British	Moore Line, Ltd.	375.0	52.6	24.6	Antwerp, Belgium.	N. Plymouth, N. Z.	Basic slag	6,738	6,051	
Columbia	1	5.00	1	7.35	1	15.10	1	16.15	Danish	D/S Orient.	384.7	54.4	13.6	New York, N. Y.	Vancouver, B. C.	Ballast	6,427	4,751	
Patoka	31	12.55	1	8.25	1	15.43	1	15.43	American	U. S. Navy.	461.0	60.0	0	Hampton Rds., Va.	Vancouver, B. C.	Ballast	1,718	5,699	
Americusstar	2	00.50	2	5.40	2	13.54	2	15.20	American	Nelson Line	388.8	52.7	17.9	New York, N. Y.	Seattle, Wash.	General	1,718	5,699	
V-5 ⁴	30	16.40	2	6.40	2	14.21	2	14.21	American	U. S. Navy.	341.0	57.7	0	Hampton Rds., Va.	Balboa, C. Z.	Ballast	5,696	8,508	
F. J.	2	1.20	2	7.15	2	15.20	2	15.15	American	Luckenbach Line	446.0	56.0	25.0	Houston, Tex.	Portland, Ore.	General	5,696	8,508	
Luckenbach	2	7.50	2	8.00	2	15.54	2	17.00	British	Blue Star Line	473.8	59.0	23.6	Tyne, England	Vancouver, B. C.	Ballast	10,405	7,401	
Trojanstar	1	21.00	2	9.30	2	16.48	2	19.25	Swedish	Johnson Line	428.9	56.2	18.3	Limhamn, Sweden.	Vancouver, B. C.	(?)	4,619	7,476	
Canada	2	14.40	2	16.45	3	9.14	3	10.16	American	Richfield Oil Co.	430.0	59.6	19.0	Baltimore, Md.	Los Angeles, Calif.	Ballast	7,773	5,634	
Pat Doheny	2	15.00	2	17.45	3	10.14	3	11.35	American	Isthmian S. S. Lines	424.6	55.2	23.4	Baltimore, Md.	Tacoma, Wash.	Steel, general	6,345	7,470	
Robin Adair	2	15.00	2	17.45	3	10.14	3	11.35	American	Isthmian S. S. Lines	424.6	55.2	23.4	Baltimore, Md.	Tacoma, Wash.	Steel, general	6,345	7,470	
L-53 ⁵	2	16.05	3	2.40	3	11.12	3	12.20	British	U. S. Navy.	477.9	62.9	26.9	London, England	Cristobal, C. Z.	Ballast	3,300	11,053	
Maimoa	3	4.05	3	5.05	3	14.53	3	15.55	American	Shaw, Savill & Albion	456.1	56.0	22.2	New York, N. Y.	Auckland, N. Z.	General	5,335	8,313	
Defiance	29	11.45	3	7.10	3	15.39	3	16.40	Norwegian	Roosevelt S. S. Co., S. B.	367.5	51.5	13.0	Boston, Mass.	Shanghai, China.	Ballast	5,427	4,113	
Rigel	3	7.25	3	7.50	3	16.02	3	17.20	French	Berges S. S. Co.	425.8	56.9	18.6	Cherbourg, France.	Los Angeles, Calif.	Ballast	7,085	5,050	
Melpomene	3	6.40	3	9.00	3	17.01	3	18.05	Norwegian	Desmarais Freres	461.9	60.6	18.6	Boston, Mass.	Los Angeles, Calif.	Ballast	305	9,853	
Triton	3	6.40	3	9.00	3	17.01	3	18.05	Norwegian	Wilhelm Wilhelmsen	461.9	60.6	18.6	Boston, Mass.	Sydney, Australia.	General	7,853	9,959	
Corinto	3	13.50	3	9.55	3	17.49	3	19.18	American	Panama Mail S. S. Co.	251.0	40.0	13.7	Cristobal, C. Z.	Champerico, Guat.	Ballast	2,352	1,549	
Wilkeno	3	14.15	4	00.15	4	9.18	4	12.20	American	Williams S. S. Line	415.0	56.0	15.7	Baltimore, Md.	Seattle, Wash.	General	1,539	7,750	
Oregonian	3	20.15	4	1.30	4	10.35	4	12.00	American	Amer-Hawaiian Line	404.5	53.9	20.0	Boston, Mass.	Seattle, Wash.	General	2,950	6,754	
Welsh City	4	6.30	4	6.40	4	15.15	4	16.20	British	Mitsubishi	411.7	54.5	27.0	Port Tampa, Fla.	Shanghai, China.	General	7,899	9,957	
Harry	4	3.50	4	7.05	4	16.08	4	17.10	American	Luckenbach Line	448.9	60.2	22.5	Boston, Mass.	Seattle, Wash.	General	2,924	9,262	
Helfron	4	7.30	4	8.00	4	16.35	4	17.35	American	Norton, Lilly & Co.	440.0	56.0	15.0	Baltimore, Md.	Everett, Wash.	Ballast	8,312	6,097	
San Francisco	3	3.20	4	9.25	4	17.33	4	18.40	French	French Line	431.0	57.2	18.8	Havre, France	Vancouver, B. C.	General	1,734	5,944	
Morgen Sun	4	9.45	4	10.10	4	22.56	4	23.59	Norwegian	Per. Stor. & Fin. Corp.	442.7	58.8	17.0	Avonmouth, Eng.	Los Angeles, Calif.	Ballast	7,539	5,044	
Eastern Sun	4	10.00	4	11.20	4	18.36	4	19.40	Norwegian	Sun Oil Co.	490.6	66.0	22.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast	9,607	6,551	
Gen. G. W.	4	9.40	4	9.40	4	17.33	4	18.36	American	U. S. Army.	89.0	22.0	0	Cristobal, C. Z.	Balboa, C. Z.	Ballast	7,394	5,099	
Huguenot	4	13.55	5	00.10	5	9.12	5	10.11	American	Richfield Oil Co.	434.0	56.2	19.0	New York, N. Y.	Los Angeles, Calif.	Ballast	15,551	4,297	
Marore	4	7.55	5	2.00	5	10.25	5	11.30	American	Ore S. S. Corp.	550.0	72.0	21.5	Baltimore, Md.	Cruz Grande, Chile	General	2,205	8,279	
Parrakoola	4	21.20	5	3.50	5	11.31	5	12.50	Swedish	Transatlantic S. S. Co.	448.0	57.0	17.6	Gavle, Sweden.	Melbourne, Aus'la.	Wood, pulp, gen.	2,205	8,279	
Hokuroku	5	9.30	5	10.00	5	16.27	5	18.15	Japanese	Osaka Shosen Kaisha	446.0	60.6	19.1	New York, N. Y.	Hongkong, China.	General	2,665	8,942	
Maru	5	9.30	5	10.00	5	16.27	5	18.15	Japanese	Osaka Shosen Kaisha	446.0	60.6	19.1	New York, N. Y.	Hongkong, China.	General	2,665	8,942	

¹ Tanker. ² Motor ship. ³ Aircraft tender. ⁴ Submarine. ⁵ Launch. ⁶ Tug.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Gen. Wm. M. Graham ¹⁵	1	7:25	1	7:00	1	14 45	1	12 05	American.	U. S. Army	160.2	32.0		Balboa, C. Z.	Cristobal, C. Z.	Coffee, general.	1,600	3,041
Agra	1	8:09	1	8:09	1	16 20	1	22 05	German	North German Lloyd	296.3	46.5	15.0	Champenco, Guat.	Bremen, Germany	General	7,367	7,820
Wiram	1	7:40	1	8:40	1	17 20	1	23 30	German	North German Lloyd	449.1	58.2	26.0	Vancouver, B. C.	Bremen, Germany	General	7,591	8,044
Buenos Aires ¹⁶	1	8:10	1	10:40	1	18 50	1	21 35	Swedish	Johnson Line	290.9	56.7	27.0	Vancouver, B. C.	Stockholm, Sweden	General	7,345	7,800
Champerico	1	11:45	1	12:20	1	20 00	2	14 05	British	Pacific Steam Nav. Co.	290.1	47.1	15.5	Champenco, Guat.	Cristobal, C. Z.	(*)	268	2,597
Svealand ¹⁶	1	14:05	1	14:52	2	14 05	2	14 45	Swedish	Ore S. S. Corp.	561.1	72.2	34.0	Valparaiso, Chile	New York, N. Y.	Iron ore.	22,146	15,424
Rapoi	1	15:10	1	16:05	2	00 40	2	22 45	German	North German Lloyd	393.4	51.3	26.0	Valparaiso, Chile	Hamburg, Germany	Nitrates, general.	7,510	6,583
Astral ¹⁷	1	16:20	1	17:07	1	1 50	1	1 50	American.	Standard Transp. Co.	439.5	58.0	29.0	Los Angeles, Calif.	New York, N. Y.	Gas oil.	10,351	8,913
Atlantic ¹⁸	1	9:00	1	6:09	2	14 51	2	14 51	Norwegian.	Anglo-Saxon Pet. Co.	441.6	57.5	27.0	Los Angeles, Calif.	London, England	Gasoline.	9,070	7,589
Lautaro ¹⁶	1	23:50	2	6:39	2	18 00	2	21 25	British	Pacific Steam Nav. Co.	399.1	52.2	27.5	Valparaiso, Chile	London, England	General	7,813	6,759
Heranger ¹⁶	1	22:45	2	7:30	2	16 55	2	20 10	Norwegian.	Westfal, Larsen & Co.	398.1	54.8	19.0	Vancouver, B. C.	Pernambuco, Braz.	Lumber, general.	3,825	6,864
Yuri Maru	2	1:00	2	7:45	2	18 45	2	20 25	Japanese.	Kokusaï Kisen Kaisha	425.0	53.6	27.3	Milke, Japan	Boston, Mass.	Sugar	8,000	6,909
Santa Clara	2	1:00	2	8:15	2	15 55	2	21 00	American.	Grace Line	483.3	63.9	24.0	Talcahuano, Chile	New York, N. Y.	General	3,537	11,080
Durazzo	2	14:30	2	15:08	2	23 20	3	1 00	German	Hamburg-American Line	227.5	34.5	14.0	Tumaco, Colombia.	Cristobal, C. Z.	Coffee, hides	340	1,632
El Lobo	1	19:30	2	17:29	3	1 00	3	1 00	British	Atlantic Refining Co.	385.2	51.0	23.0	La Libertad, Ecua.	Philadelphia, Pa.	Crude oil	6,102	4,851
California	2	12:15	3	6:10	3	14 40	3	15 20	American.	Panama-Pacific Line	574.4	80.3	28.4	San Francisco, Calif.	New York, N. Y.	General	7,700	24,506
San Eduardo ¹	3	1:40	3	6:30	3	15 45	3	19 00	British	Anglo-Mexican Oil Co.	420.3	54.6	26.0	Los Angeles, Calif.	Lizards, Eng. I.	Gasoline	8,200	6,390
Saramacca	4	2:00	3	7:14	3	16 15	3	16 15	American.	United Fruit Co.	336.4	42.0	20.0	San Francisco, Cal.	Cristobal, C. Z.	General	1,037	3,568
Gen. G. W. Gietty ¹⁵	3	6:40	3	7:30	3	16 20	3	16 20	American.	U. S. Army	98.0	22.0		Balboa, C. Z.	Cristobal, C. Z.	General	5,673	7,103
Ohoson	3	8:14	3	8:14	3	16 50	3	16 50	American.	Amer.-Hawaiian Line	407.7	53.7	25.0	Portland, Ore.	Boston, Mass.	General	5,400	5,349
Herman Fraseh	3	8:30	3	9:16	3	18 05	3	18 05	American.	Dutton Lumber Corp.	356.0	51.6	27.0	Westport, Oreg.	Providence, R. I.	Lumber	7,045	7,989
Takaoka Maru	2	20:50	3	10:14	3	19 30	4	12 10	Japanese.	Nippon Yusen Kaisha	445.0	58.0	24.0	Hongkong, China.	New York, N. Y.	General	7,645	7,989
Lillian	3	12:20	3	13:07	3	20 15	3	20 20	American.	Luckenbach Line	449.9	60.2	31.0	Portland, Oreg.	Boston, Mass.	General	8,400	9,294
Canadian	3	14:10	3	14:49	3	22 20	4	1 40	British.	Can. Nat. Steamships.	400.0	52.3	19.0	Melbourne, Aus'lia.	Halifax, N. S.	General	2,427	5,954
Conqueror	4	6:15	4	6:15	4	16 30	4	16 30	American.	U. S. Navy	384.0	64.9	26.3	Balboa, C. Z.	Cristobal, C. Z.	General	5,348	6,642
Rochester	3	22:00	4	6:16	4	16 45	4	21 05	Swedish	Johnson Line	409.0	53.0	24.0	Vancouver, B. C.	Stockholm, Sweden	(*)	7,792	7,795
Axel Johnson ¹⁶	3	21:30	4	7:26	4	17 25	4	22 30	Italian.	Nav. Libera Trestina	430.0	53.0	29.5	Vancouver, B. C.	Trieste, Italy	General	8,015	6,112
Feltrina ¹⁶	3	21:55	4	8:16	4	18 15	4	19 20	Norwegian.	Fern Line	382.7	54.3	26.0	Vladtoek, U. S. S. R.	Copenhagen, Den.	Soya beans	7,192	6,112
Pembank ¹⁶	4	9:20	4	9:00	4	19 15	4	20 10	British.	Macley & McIntyre.	401.9	55.0	27.0	Manila, P. I.	London, England	General	8,015	6,134
Janeta	4	9:20	4	9:47	4	20 00	4	21 05	Japanese.	Kokusaï Kisen Kaisha.	385.0	51.0	24.0	Manila, P. I.	New York, N. Y.	Sugar, hemp	7,792	6,219
Belgium Maru	4	1:30	4	10:46	4	21 00	4	21 00	American.	Ishimian S. S. Lines	424.8	55.2	26.0	Vancouver, B. C.	Baltimore, Md.	(*)	7,186	7,473
Robin	4	1:40	4	11:27	4	22 25	5	14 10	Dutch.	N. Pacific Coast Line	485.5	67.2	29.2	Vancouver, B. C.	Rotterdam, Holl'd.	General	9,200	7,937
Goodfellow	4	7:15	4	7:40	4	22 50	4	22 50	American.	Shell Oil Co.	425.0	57.2	28.0	Los Angeles, Calif.	Fall River, Mass.	(*)	9,840	7,619
Dredhtjg ¹⁶	4	7:40	4	8:40	4	23 45	4	23 45	American.	Williams S. S. Corp.	386.8	52.2	24.0	Seattle, Wash.	Baltimore, Md.	(*)	6,114	4,975
Wipolo	4	9:40	4	10:46	4	23 45	4	23 45	American.	Williams S. S. Corp.	386.8	52.2	24.0	Seattle, Wash.	Baltimore, Md.	(*)	6,114	5,080

¹⁵ Mine plauter. ¹⁶ Motor ship. ¹⁷ For orders. ¹⁸ Coffee, hides, and broomroot. ¹⁹ Wheat, fruit, and general. ²⁰ Lumber, pulp, and general. ²¹ Rosene and gasoline.

Port of Origin	4	15-10	4	15-51	5	1-15	7	10-30	British	United Oil Co.	420.5	54	4	26.0	Los Angeles, Calif.	Cristobal, C. Z.	8,723	6,022	4,543	
Tasachaba ¹																				
Sacramento	4	15-10	4	15-51	5	1-15	7	10-30	British	U. S. Navy	224.0	40.0	14.3		Cristobal, C. Z.					
Dochet	5	6-21	5	16-45	5	22-03	5	16-35	American	Gulf-Pacific Line	386.8	52.2	19.0		Mobile, Ala.					
Asia ¹⁶	4	23-00	5	7-30	5	17-25	5	18-25	Danish	East Asiatic Co., Ltd.	425.3	55.2	30.1		Copenhagen, Den.					
Nordkapp ¹⁶	5	5-45	5	8-09	5	18-15	5	19-15	British	Donaldson Line	399.7	51.9	25.0		Victoria, B. C.					
Point Montara	5	8-50	5	9-48	5	18-05	5	19-05	Danish	E. I. Dupont	384.7	54.4	25.0		Tocopilla, Chile					
Bradburn	5	9-30	5	10-19	5	19-55	5	19-55	American	Swayne & Hoyt	324.0	46.2	20.0		New Orleans, La.					
Benjamin	5	13-00	5	13-30	5	21-00	5	22-55	British	Fir W. R. Smith & Sons	415.0	54.3	25.0		London, England					
Franklin ¹⁶	5	13-50	5	14-44	5	22-50	7	9-32	Norwegian	Fred Olsen & Co.	452.0	59.5	28.0		Ostlo, Norway					
City of																				
Odin	5	14-10	5	15-35	5	23-45	8	14-10	American	Panama Mail S. S. Co.	206.1	45.9	18.4		San Francisco, Cal.					
Galdas ¹⁶	5	17-00	5	17-39	6	2-35	6	3-35	German	Chilean Nitrate Prod.	432.5	59.0	24.0		Tocopilla, Chile					
Wyoming	5	19-20	6	18-55	7	12-40	7	9-20	French	National Navigation Co.	116.0	21.0	11.0		Buenaventura, Col.					
Minnesota	6	22-14	6	6-13	6	21-20	7	9-20	American	French Line	407.3	61.2	26.0		Vancouver, B. C.					
Orta	6	1-50	6	7-38	6	20-30	7	20-30	American	Amer.-Hawaiian Line	407.7	53.7	27.0		Seattle, Wash.					
San Clemente	6	23-30	6	8-13	6	19-00	7	1-10	British	Pacific Steam Nav. Co.	484.5	58.2	20.0		Liverpool, England					
West Cape	6	2-15	6	9-12	6	21-25	6	22-15	American	Quaker Line	409.3	51.4	24.5		Portland, Ore.					
Jefferson	6	7-50	6	6-20	6	20-15	6	22-25	American	McCormick S. S. Co.	403.0	54.2	25.0		Seattle, Wash.					
Myers	6	12-05	6	13-39	6	23-40	7	5-30	American	Interocean S. S. Co.	440.0	56.0	28.4		Portland, Ore.					
Santa Rita ¹⁶	6	18-20	7	6-17	7	18-20	8	00-30	American	Grace Line	370.0	53.2	25.0		Valparaiso, Chile					
Corinthie	7	9-30	7	10-36	7	19-30	8	1-05	British	Shaw, Savill & Albion	500.3	63.3	25.0		Wellington, N. Z.					
Cedarbank ¹⁶	7	12-30	7	13-24	7	22-10	8	4-21	British	Andrew Weir & Co.	420.4	53.9	25.0		Pimental, Peru					

¹ Tanker. ² Lumber, wheat, and spelter. ³ Nitrates, copper, and general. All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Date	Vessel	Line	From	Date	Vessel	Line	For
February 1	Tolosa	United Fruit Co.	Port Limon, Costa Rica.	February 1	No. 9670 ²⁴	Pan American Airways	San Salvador and waypts.
February 1	No. 9664 ²⁴	Pan American Airways	San Salvador and waypts.	February 1	No. 669-M ²⁴	Pan American Airways	Miami via waypts.
February 1	N. C. 26-V ²⁴	Sikorsky Aircraft Corp.	Bridgeport and waypts.	February 1	No. 300-N ²⁴	Pan American-Grace Airways	Talara via waypts.
February 2	Caledonia	Anchor Line	New York via waypts.	February 1	N. C. 26-V ²⁴	Sikorsky Aircraft Corp.	Talara, Peru.
February 2	Vulcania	Cosulich Line	New York via waypts.	February 1	Tolosa	United Fruit Co.	New York via Habana.
February 2	Macoris	French Line	Havre via waypts.	February 1	Aucoa	Panama R. R. S. S. Line	New York via Haiti.
February 2	Heredia	United Fruit Co.	New Orleans and Habana.	February 3	Caledonia	Anchor Line	New York via waypts.
February 2	No. 9685 ²⁴	Pan American Airways	San Salvador and waypts.	February 3	Valeancia	Pan American Airways	New York via waypts.
February 2	Coritoba C-40 ²⁴	Swadeca Airplane Co.	Barranquilla and waypts.	February 3	No. 145-M ²⁴	Herodis	Aguadulce
February 2	J. M. Daugizer	Pan American Airways	Aruba, D. W. I.	February 3	Herodis	United Fruit Co.	New Orleans and waypts.
February 3	No. 145-M ²⁴	Pan American Airways	Aguadulce	February 3	Macoris	French Line	Havre via waypts.
February 3	Camden	United Fruit Co.	Talara via waypts.	February 4	J. M. Daugizer	Pan American Airways	Aruba, D. W. I.
February 3	No. 300-N ²⁴	Pan American-Grace Airways	Talara via waypts.	February 4	No. 9664 ²⁴	Pan American Airways	San Salvador and waypts.
February 4	Republic	United States Lines	Philadelphia and waypts.	February 4	No. 608-M ²⁴	Pan American Airways	Miami via waypts.
February 4	Pastores	United Fruit Co.	New York via Habana.	February 4	Inapacuna ²⁵	A. Tagaropolos	Colon, Rep. of Panama.
February 4	Barneveld	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	February 4	Santa Marta	United Fruit Co.	New York via Kingston.

²⁴ Air mail carrier. ²⁵ Motor boat. * Other than ships passing through the Canal. * DEPARTURES.

Traffic by Nationality for January, 1931.

The following tabulation shows the commercial traffic through the Canal during the month of January, 1931, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for January, 1930 and 1929:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	1	7,044	4,567	7,217	4,398	\$5,071.68	
British	73	401,297	285,543	469,284	285,737	319,231.18	141,917
Chilean	2	10,164	6,652	12,658	7,201	8,315.00	3,762
Colombian	5	731	712	1,113	716	862.10	707
Danish	2	12,905	8,642	13,558	8,763	9,388.17	2,152
Danzig	2	14,444	12,399	21,114	11,981	10,399.68	
Dutch	5	27,044	18,227	30,691	30,782	22,783.75	12,118
French	8	39,506	30,814	49,811	30,782	35,384.79	12,219
German	16	59,080	42,024	70,084	41,890	50,675.28	33,525
Italian	2	13,497	9,879	19,101	10,556	12,348.75	2,878
Japanese	7	40,712	33,180	51,647	33,109	41,143.60	30,066
Norwegian	13	55,270	36,591	60,770	36,509	43,529.10	44,274
Panamanian	2	6,085	3,462	5,764	3,523	4,323.15	4,837
Peruvian	1	3,544	3,510	5,361	2,699	4,312.80	3,271
Swedish	7	30,291	22,143	55,450	27,155	22,113.26	3,357
United States	98	507,225	385,023	624,621	383,497	446,957.76	267,749
Total, January, 1931	244	1,228,839	903,368	1,498,244	906,915	1,036,840.05	562,832
Total, January, 1930	257	1,279,609	967,089	1,595,694	972,716	1,100,956.12	733,572
Total, January, 1929	303	1,385,682	1,062,520	1,748,639	1,069,766	1,179,256.79	759,820

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	1	4,030	3,214	4,953	3,169	\$4,017.50	7,250
British	61	330,570	245,703	403,425	246,636	305,150.16	398,456
Chilean	2	9,202	7,304	13,615	8,078	9,130.00	9,295
Colombian	4	570	550	880	550	671.30	707
Danish	4	24,130	16,298	27,730	16,874	20,372.50	36,710
Danzig	2	14,444	12,399	21,114	11,981	15,498.75	26,500
Dutch	4	21,315	12,528	21,952	12,562	15,660.00	24,018
French	6	31,665	22,794	37,649	21,750	28,492.50	43,799
German	16	58,104	41,299	71,371	41,803	51,625.00	78,742
Greek	1	4,292	2,720	4,349	2,686	3,400.00	8,400
Italian	4	28,575	20,324	34,209	22,126	25,405.00	22,431
Japanese	7	36,945	32,291	48,700	31,606	39,852.65	39,474
Norwegian	17	75,445	52,723	87,909	52,562	65,903.75	115,626
Spanish	1	3,052	2,068	3,518	2,079	2,585.00	5,830
Swedish	2	9,833	6,604	20,547	8,132	8,255.00	27,535
United States	99	495,160	377,900	612,650	377,928	470,618.76	689,982
Yugoslav	1	4,700	3,730	5,965	3,772	4,662.50	9,350
Total, January, 1931	232	1,152,032	860,449	1,420,536	864,294	1,071,300.37	1,544,105
Total, January, 1930	274	1,322,019	1,013,224	1,651,237	1,008,859	1,259,255.12	1,878,060
Total, January, 1929	300	1,385,598	1,055,292	1,722,295	1,052,355	1,323,558.33	2,099,015

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	2	11,074	7,781	12,170	7,567	\$9,090.18	7,250
British	134	731,867	531,246	872,709	532,373	624,381.34	540,373
Chilean	4	19,366	13,956	26,273	15,279	17,445.00	13,057
Colombian	9	1,301	1,262	1,993	1,266	1,533.40	1,414
Danish	6	37,035	24,940	41,288	25,637	29,760.67	38,862
Danzig	4	28,888	24,798	42,228	23,962	25,898.43	26,500

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Dutch.....	9	48,359	30,755	52,643	30,961	\$38,443.75	36,136
French.....	14	71,171	53,608	87,460	52,532	63,877.29	56,018
German.....	32	117,184	83,323	141,455	83,693	102,300.28	112,267
Greek.....	1	4,292	2,720	4,349	2,686	3,400.00	8,400
Italian.....	6	42,072	30,203	53,310	32,682	37,753.75	25,309
Japanese.....	14	77,657	65,471	100,347	64,715	80,996.25	69,540
Norwegian.....	30	130,715	89,314	148,679	89,071	109,432.85	159,900
Panamanian.....	2	6,085	3,462	5,764	3,523	4,325.15	4,837
Peruvian.....	1	3,544	3,510	5,361	2,699	4,312.80	3,271
Spanish.....	1	3,052	2,068	3,518	2,079	2,585.00	5,830
Swedish.....	9	40,124	28,747	75,997	35,287	30,368.26	30,892
United States.....	197	1,002,385	762,923	1,237,271	761,425	917,576.52	957,731
Yugoslav.....	1	4,700	3,730	5,965	3,772	4,662.50	9,350
Total, January, 1931.....	476	2,380,871	1,763,817	2,918,780	1,771,209	2,108,140.42	2,106,937
Total, January, 1930.....	531	2,601,628	1,980,313	3,246,931	1,981,575	2,360,211.24	2,611,632
Total, January, 1929.....	603	2,771,280	2,117,812	3,470,934	2,122,121	2,502,815.12	2,858,835

Commercial Traffic Through the Panama Canal in January, 1931, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of January, 1931, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for January, 1930 and 1929. The amount of cargo shown is the amount carried by vessels operating over the respective trade routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal: United States.....	66	358,104	273,031	441,016	272,935	\$314,398.74	167,097
Europe to west coast of Canada:							
British.....	18	95,144	66,180	107,669	66,452	71,657.47	6,152
Dutch.....	2	15,407	10,748	17,465	10,832	13,435.00	4,483
French.....	2	12,442	7,814	13,609	8,122	9,767.50	3,900
German.....	3	19,394	12,294	21,105	12,850	14,793.60	9,722
Italian.....	1	5,981	4,365	7,098	4,498	5,456.25	1,279
Norwegian.....	2	11,474	7,984	12,841	8,049	9,980.00	10,740
Swedish.....	1	5,533	3,430	5,554	4,225	4,287.50	3,357
United States.....	1	5,696	4,106	6,601	4,157	5,132.50	2,553
Total.....	30	171,071	116,921	191,942	119,185	134,509.82	42,186
East coast of United States to west coast of South America:							
British.....	10	44,001	36,538	60,035	35,866	32,337.86	1,242
Chilean.....	2	10,164	6,652	12,658	7,201	8,315.00	3,762
Danish.....	1	4,569	2,709	4,472	2,732	3,386.25	2,152
Norwegian.....	1	2,025	1,650	2,888	1,678	2,062.50	1,377
Peruvian.....	1	3,544	3,510	5,361	2,699	4,312.80	3,271
Swedish.....	3	13,001	10,418	35,701	12,584	9,360.72	5,557
United States.....	10	43,116	30,956	54,805	30,924	36,421.50	20,139
Total.....	28	120,420	92,433	175,920	93,684	96,196.63	31,943
East coast of United States to Far East:							
British.....	6	33,273	19,458	31,906	19,262	24,322.50	27,656
Japanese.....	5	28,692	23,382	36,164	23,002	29,075.55	21,479
Norwegian.....	3	16,588	9,211	15,560	9,293	11,513.75	16,431
United States.....	4	22,980	15,599	25,415	15,580	19,498.75	32,944
Total.....	18	101,533	67,650	109,045	67,137	84,410.55	98,510

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo:
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Europe to west coast of South America:							
British	4	19,105	14,851	23,830	14,960	\$18,563.75	14,895
Danzig	2	14,444	12,399	21,114	11,931	10,399.68	
Dutch	2	10,895	7,185	12,446	7,244	8,981.25	7,552
French	3	13,591	11,864	18,118	11,935	14,697.05	4,723
German	4	20,235	15,558	25,036	15,320	19,447.50	15,391
Italian	1	7,516	5,514	12,003	6,058	6,892.50	1,599
Swedish	1	3,343	2,952	5,349	3,626	2,406.96	
Total	17	89,129	70,323	117,896	71,124	81,388.69	44,160
Europe to Australasia:							
British	14	111,739	76,555	127,533	78,888	94,947.98	52,949
French	1	3,681	3,096	5,112	3,079	3,870.00	3,596
Total	15	115,420	79,651	132,645	81,967	98,817.98	56,545
Cristobal to west coast of South America:							
Colombian	5	731	712	1,113	716	862.10	707
Dutch	1	742	294	780	323	367.50	83
German	5	4,189	2,878	5,370	2,950	3,597.50	1,048
Total	11	5,662	3,884	7,263	3,989	4,827.10	1,838
Europe to west coast of United States:							
Belgian	1	7,044	4,567	7,217	4,398	5,071.68	
British	3	16,793	14,563	20,204	12,772	12,090.96	
French	1	5,068	4,377	7,011	3,989	3,648.96	
German	2	11,003	7,618	13,347	7,723	8,241.68	3,875
Panamanian	1	6,065	3,447	5,744	3,507	4,308.75	4,837
United States	1	4,967	4,568	7,138	3,988	3,582.72	
Total	9	50,949	39,140	60,661	36,377	36,944.75	8,712
Foreign vessels in ballast—United States inter-coastal:							
British	1	4,512	2,857	4,689	2,876	3,248.64	
French	1	4,724	3,663	5,961	3,657	3,401.28	
Norwegian	2	9,394	6,583	11,005	6,565	6,606.92	
Swedish	2	8,414	5,343	8,846	6,720	6,058.08	
Total	6	27,044	18,446	30,501	19,818	19,314.92	
East coast of United States to Australasia:							
British	4	24,695	15,427	24,779	15,451	19,283.75	20,440
United States	1	5,042	3,674	5,868	3,673	4,592.50	964
Total	5	29,737	19,101	30,647	19,124	23,876.25	21,404
East coast of United States to Philippine Islands:							
British	2	13,290	7,451	13,395	7,527	9,313.75	9,060
Norwegian	1	3,761	2,387	4,014	2,350	2,983.75	4,809
United States	2	12,928	9,861	15,359	9,638	12,326.25	10,635
Total	5	29,979	19,699	32,768	19,515	24,623.75	24,504
Cristobal to west coast of United States:							
United States	5	11,696	9,510	15,853	9,404	9,176.90	1,336
Cristobal to west coast of Central America:							
British	4	3,734	3,206	6,001	3,369	4,007.50	2,019
Norwegian	1	722	651	990	569	519.84	
Total	5	4,456	3,857	6,991	3,938	4,527.34	2,019
East coast of United States to west coast of Canada:							
Norwegian	1	4,859	2,619	4,444	2,669	3,273.75	
United States	1	2,617	2,023	3,226	2,030	2,528.75	3,665
Total	2	7,476	4,642	7,670	4,699	5,802.50	3,665
East coast of United States to Balboa:							
Norwegian	1	722	651	990	569	519.84	
United States	1	8,272	8,170	10,388	7,886	9,926.40	10,019
Total	2	8,994	8,821	11,378	8,455	10,446.24	10,019

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of Canada to west coast of South America:							
British.....	2	14,483	12,366	22,713	12,035	\$10,427.76	.....
East coast of Canada to Australasia:							
British.....	2	8,605	6,571	10,950	6,694	8,213.75	3,887
West Indies to Balboa:							
Norwegian.....	1	5,725	4,855	8,038	4,767	6,068.75	10,917
United States.....	1	2,235	1,906	2,991	1,739	2,382.50	2,445
Total.....	2	7,960	6,761	11,029	6,506	8,451.25	13,362
Europe to west coast of Central America:							
German.....	2	4,259	3,676	5,226	3,047	4,595.00	3,489
Cristobal to Balboa:							
Panamanian.....	1	20	15	20	16	14.40	.....
United States.....	1	55	67	98	67	50.25	.....
Total.....	2	75	82	118	83	64.65	.....
Around the world:							
United States.....	2	19,028	14,573	24,661	14,515	18,216.25	5,160
West Indies to west coast of United States:							
Danish.....	1	8,336	5,933	9,086	6,031	6,001.92	.....
East coast of South America to west coast of United States:							
United States.....	1	5,030	3,514	5,515	3,511	4,392.50	3,920
East coast of United States to Hawaii:							
United States.....	1	5,450	3,465	5,687	3,450	4,331.25	6,872
Canadian intercoastal:							
British.....	1	4,108	3,245	5,399	3,333	4,056.25	1,117
East coast of Canada to west coast of United States:							
British.....	1	3,757	3,070	4,968	3,042	3,837.50	2,500
East coast of Canada to Far East:							
Japanese.....	1	4,389	4,357	5,857	4,259	5,266.80	4,733
West Indies to west coast of Canada:							
British.....	1	4,058	3,205	5,213	3,210	2,921.76	.....
East coast of South America to Far East:							
Japanese.....	1	7,631	5,441	9,626	5,848	6,801.25	3,854
Grand total, January, 1931...	244	1,228,839	903,368	1,498,244	906,915	1,036,840.05	562,832
Grand total, January, 1930...	257	1,279,609	967,089	1,595,694	972,716	1,100,956.12	733,572
Grand total, January, 1929...	303	1,385,682	1,062,520	1,748,639	1,069,766	1,179,256.79	759,820

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	72	396,250	300,223	481,688	301,505	\$374,991.45	535,025
West coast of Canada to Europe:							
Belgian.....	1	4,030	3,214	4,953	3,169	4,017.50	7,250
British.....	16	91,055	63,913	103,277	64,116	79,891.25	115,434
Danish.....	1	8,076	5,689	10,110	6,170	7,111.25	9,821
French.....	2	12,125	7,102	13,804	7,486	8,877.50	14,083
German.....	4	24,400	16,114	27,288	16,593	20,143.75	30,192
Italian.....	2	12,594	9,047	14,666	9,328	11,308.75	18,131
Norwegian.....	3	14,758	8,800	14,585	8,936	11,000.00	20,950
United States.....	1	5,450	3,465	5,687	3,450	4,331.25	7,821
Total.....	30	172,488	117,344	194,370	119,248	146,681.25	223,682
West coast of South America to Europe:							
British.....	6	34,459	26,613	44,987	26,650	33,266.25	41,566
Danzig.....	2	14,444	12,399	21,114	11,981	15,498.75	26,500
Dutch.....	3	20,573	12,234	21,172	12,239	15,292.50	23,673
French.....	2	9,000	6,538	10,797	6,528	8,172.50	14,236
German.....	5	22,795	17,160	27,956	17,224	21,450.00	37,216
Greek.....	1	4,292	2,720	4,349	2,686	3,400.00	8,400

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAOE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of South America to Europe—Continued:							
Italian.....	2	15,981	11,277	19,543	12,798	\$14,096.25	4,300
Japanese.....	1	4,400	4,357	5,864	4,259	5,280.00	7,748
Norwegian.....	2	4,989	4,007	6,696	4,044	5,008.75	8,684
Spanish.....	1	3,052	2,068	3,518	2,079	2,585.00	5,830
Total.....	25	133,985	99,373	165,996	100,488	124,050.00	178,153
West coast of South America to east coast United States:							
British.....	6	19,849	15,995	26,299	15,924	19,993.75	33,771
Chilean.....	2	9,202	7,304	13,615	8,078	9,130.00	9,295
Danish.....	1	4,936	2,801	4,617	2,782	3,501.25	8,000
Swedish.....	1	4,496	3,743	15,337	4,385	4,678.75	21,650
United States.....	12	44,235	34,356	63,295	34,306	42,302.41	89,427
Yugoslavian.....	1	4,700	3,730	5,965	3,772	4,662.50	9,350
Total.....	23	87,418	67,929	129,128	69,247	84,268.66	171,493
West coast of United States to Europe:							
British.....	7	35,015	29,664	47,310	29,789	36,976.40	52,177
Danish.....	1	6,054	5,058	8,271	5,057	6,322.50	11,667
French.....	1	5,068	4,377	7,011	3,989	5,471.25	8,380
German.....	1	4,340	3,762	8,370	3,658	4,702.50	7,923
Norwegian.....	6	29,021	23,205	38,490	22,833	29,006.25	51,767
United States.....	1	8,619	7,026	11,247	6,953	8,782.50	15,365
Total.....	17	88,117	73,092	120,699	72,279	91,261.40	147,279
Australasia to Europe:							
British.....	13	96,114	67,304	109,749	68,162	84,130.00	82,784
French.....	1	5,472	4,777	6,037	3,747	5,971.25	7,100
Total.....	14	101,586	72,081	115,786	71,909	90,101.25	89,884
West coast of South America to Cristobal:							
Colombian.....	4	570	550	880	550	671.30	707
Dutch.....	1	742	294	780	323	367.50	345
German.....	5	4,232	2,879	5,398	2,974	3,598.75	2,463
Total.....	10	5,544	3,723	7,058	3,847	4,637.55	3,515
Philippine Islands to east coast of United States:							
Japanese.....	3	14,197	13,358	19,244	13,057	16,352.65	20,680
Norwegian.....	1	7,063	4,017	6,744	4,109	5,021.25	4,341
United States.....	2	10,467	8,851	12,748	8,897	11,063.75	15,425
Total.....	6	31,727	26,226	38,736	26,063	32,437.65	40,446
West coast of United States to Cristobal:							
British.....	1	4,633	4,042	6,496	4,047	5,052.50	7,186
United States.....	5	11,696	9,510	15,853	9,404	11,834.45	3,757
Total.....	6	16,329	13,552	22,349	13,451	16,886.95	10,943
Far East to east coast of United States:							
Japanese.....	3	18,348	14,576	23,592	14,290	18,220.00	11,046
United States.....	2	11,176	8,365	12,013	7,389	10,456.25	16,107
Total.....	5	29,524	22,941	35,605	21,679	28,676.25	27,153
West coast Central America to Cristobal:							
British.....	3	3,028	2,568	4,831	2,715	3,210.00	948
Norwegian.....	1	722	651	990	569	813.75	1,246
Total.....	4	3,750	3,219	5,821	3,284	4,023.75	2,194
West coast of Canada to east coast of United States:							
British.....	1	5,142	3,532	5,601	3,533	4,415.00	8,300
Danish.....	1	5,064	2,750	4,732	2,865	3,437.50	7,222
United States.....	1	2,617	2,023	3,283	2,001	2,528.75	3,633
Total.....	3	12,823	8,305	13,616	8,399	10,381.25	19,155

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of United States to West Indies:							
British.....	1	4,373	3,491	5,880	3,453	\$4,363.75	6,974
Norwegian.....	1	5,338	4,528	7,554	4,471	5,660.00	9,869
Total.....	2	9,711	8,019	13,434	7,924	10,023.75	16,843
West coast of South America to east coast of Canada:							
British.....	2	14,483	12,366	22,713	12,035	15,457.50	31,300
Hawaii to Europe:							
British.....	1	4,954	2,834	4,573	2,841	3,542.50	7,084
Swedish.....	1	5,337	2,861	5,210	3,747	3,576.25	5,885
Total.....	2	10,291	5,695	9,783	6,588	7,118.75	12,969
Far East to Europe:							
Norwegian.....	2	8,246	4,621	7,977	4,616	5,776.25	13,425
Foreign vessels in ballast—United States intercoastal:							
British.....	1	4,676	2,665	4,347	2,636	3,331.25	.....
Hawaii to east coast of United States:							
United States.....	1	1,740	1,542	2,647	1,542	1,927.50	3,242
Canadian intercoastal:							
British.....	1	4,186	3,322	5,439	3,336	4,152.50	5,934
West coast of Canada to east coast of South America:							
Norwegian.....	1	5,308	2,894	4,873	2,984	3,617.50	5,344
West coast of Central America to Europe:							
German.....	1	2,337	1,384	2,359	1,354	1,730.00	948
Australasia to east coast of Canada:							
British.....	1	4,195	3,355	5,493	3,347	4,193.75	4,998
West coast of South America to West Indies:							
British.....	1	4,408	4,039	6,430	4,052	3,173.76	.....
Balboa to West Indies:							
United States.....	1	2,235	1,906	2,991	1,739	1,609.20	.....
Balboa to Cristobal:							
United States.....	1	675	633	1,198	742	791.25	180
Grand total, January, 1931...	232	1,152,032	860,449	1,420,536	864,294	1,071,300.37	1,544,105
Grand total, January, 1930...	274	1,322,019	1,013,224	1,651,237	1,008,859	1,259,255.12	1,878,060
Grand total, January, 1929...	300	1,385,598	1,055,292	1,722,295	1,052,355	1,323,558.33	2,099,015

Visit of the Prince of Wales and Brother.

The Prince of Wales and his brother, Prince George, traveling informally, were passengers aboard the steamship *Oropesa* of the Pacific Steam Navigation Co., which arrived at Cristobal from Kingston in the morning of February 6, transited the Canal, and sailed for the west coast of South America at 2 a. m., February 7. The royal visitors landed at Cristobal and flew across the Isthmus, from France Field to Paitilla Field, Panama, in a plane of the Pan American Airways, spent the forenoon in official calls, the afternoon at golf, and in the evening were entertained at dinner by the British Minister at the British Legation, after which they made a short visit to the Union Club, Panama, then continued on the voyage of the *Oropesa*. Their ultimate destination is Buenos Aires.

Tanker Traffic Through the Panama Canal in January, 1931.

During the month of January, 1931, 78 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 423,069, on which tolls of \$391,454.19 were paid. Cargo amounted to 473,266, which included 466,666 tons of mineral oils and 6,600 tons of coconut oil.

In point of net tonnage, tanker traffic decreased 27.8 per cent as compared with the tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 20.5 per cent.

Tank vessels comprised 16.4 per cent of the total commercial transits through the Canal during the month; made up 17.8 per cent of the total Panama Canal net tonnage; were the source of 18.6 per cent of the tolls collected; and carried 22.5 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of January, 1931, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for January, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	6	34,043	\$24,510.96	.....
Danzig.....	2	14,444	10,399.68	.....
French.....	1	5,068	3,648.96	.....
German.....	1	4,169	3,001.68	.....
Norwegian.....	2	10,061	9,190.67	10,917
United States.....	20	111,073	88,797.68	34,268
Total, January, 1931.....	32	178,858	139,549.63	45,185
Total, December, 1930.....	39	215,736	159,626.57	15,360
Total, November, 1930.....	40	218,894	164,388.02	18,354
Total, January, 1930.....	50	263,292	193,389.62	13,351
<i>Pacific to Atlantic.</i>				
British.....	11	55,433	58,471.41	99,143
Danish.....	1	6,054	6,322.50	11,667
Danzig.....	2	14,444	15,498.75	26,500
French.....	1	5,068	5,471.25	8,380
German.....	1	4,340	4,702.50	7,923
Norwegian.....	6	29,636	31,256.25	53,483
United States.....	24	129,236	130,181.90	* 220,985
Total, January, 1931.....	46	244,211	251,904.56	428,081
Total, December, 1930.....	38	216,170	219,664.05	402,778
Total, November, 1930.....	43	238,501	238,306.60	423,487
Total, January, 1930.....	62	322,682	333,566.85	581,928

* Includes 6,600 tons coconut oil.

The following tabulation shows the tanker traffic through the Canal during January, 1931, classified according to trade routes:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
United States intercoastal.....	17	93,069	\$69,972.98	9,878
United States to South America.....	4	21,950	15,804.00	.....
United States to Balboa.....	1	8,272	9,926.40	10,019
United States to Far East.....	1	6,857	6,055.00	11,926
Canada to South America.....	1	7,711	5,551.92	.....
West Indies to Balboa.....	2	7,960	8,451.25	13,362
Europe to United States.....	4	18,595	13,388.40	.....
Europe to South America.....	2	14,444	10,399.68	.....
<i>Pacific to Atlantic.</i>				
United States intercoastal.....	21	114,098	\$115,951.45	199,020
United States to Cristobal.....	1	4,633	5,052.50	7,186
United States to West Indies.....	2	9,711	10,023.75	16,843
United States to Europe.....	13	67,176	71,955.15	122,762
South America to United States.....	1	4,326	4,633.75	7,870
South America to Canada.....	2	14,483	15,457.50	31,300
South America to West Indies.....	1	4,408	3,173.76	.....
South America to Europe.....	3	18,857	20,208.75	36,500
Balboa to West Indies.....	1	2,235	1,609.20	.....
Philippine Islands to United States.....	1	4,284	3,838.75	* 6,600

* Coconut oil.

Of the tanker traffic passing through the Canal in January, 1931, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for January, 1931:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
January, 1931.....	22	124,796	\$95,151.23	18,325
December, 1930.....	27	151,619	109,165.68	.....
November, 1930.....	33	181,068	133,889.22	12,576
January, 1930.....	42	226,591	164,917.56	1,140
<i>From Los Angeles.</i>				
January, 1931.....	33	176,803	183,017.85	310,902
December, 1930.....	28	159,849	158,238.75	292,960
November, 1930.....	35	196,698	195,454.10	345,084
January, 1930.....	54	282,283	290,921.90	513,416

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective February 7, 1931.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb.	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.12
Paint, zinc oxide, in oil.....	Lb.	.05
Grease, gear, chain and wire rope, lubricating.....	Lb.	.08
Grease, yellow, cup, No. 3.....	Lb.	.03
Grease, yellow, cup, No. 5.....	Lb.	.03
Soda, ash.....	Lb.	.14
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending February 7, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Ancon.....	Panama R. R. S. S. Line.....		February 1.....		580
Cjd.....	Pacific Steam Navigation Co.....		February 1.....		21
Tolosa.....	United Fruit Co.....	February 1.....	February 1.....	34	383
Agira.....	Roland Line.....	February 1.....	February 1.....	(¹)	183
Witram.....	North German Lloyd.....	February 1.....	February 1.....	(¹)	177
Buenos Aires.....	Johnson S. S. Line.....	February 1.....	February 1.....	(¹)	129
Champerico.....	Pacific Steam Navigation Co.....	February 1.....	February 1.....	267	
Canada.....	Johnson S. S. Line.....	February 1.....	February 2.....	128	(¹)
Corinto.....	Panama Mail S. S. Co.....	February 1.....	February 3.....	1,017	(¹)
Lautaro.....	Pacific Steam Navigation Co.....	February 2.....	February 2.....	(¹)	57
Rapot.....	North German Lloyd.....	February 2.....	February 2.....	8	253
Santa Clara.....	Grace Line.....	February 2.....	February 2.....	351	214
Macoris.....	French Line.....	February 2.....	February 3.....	57	333
J. M. Danziger.....	Pan-American Petroleum Co.....	February 2.....	February 4.....	11,342	(¹)
Durazzo.....	Hamburg-American Line.....	February 2.....	February 2.....	341	
Takaoka Maru.....	Nippon Yusen Kaisha.....	February 3.....	February 4.....	123	60
San Francisco.....	French Line.....	February 3.....	February 4.....	34	178
Camden.....	United Fruit Co.....	February 3.....	February 5.....	7,226	(¹)
Saramacca.....	United Fruit Co.....	February 3.....	February 7.....	1,239	(¹)
Axel Johnson.....	Johnson Line.....	February 4.....	February 4.....	(¹)	245
Dorelian.....	Leyland S. S. Line.....	February 4.....	February 5.....	519	(¹)
Barneveld.....	Royal Netherlands S. S. Co.....	February 4.....	February 5.....	1,075	
Iriona.....	United Fruit Co.....	February 4.....	February 5.....	605	(¹)
Drechtidijk.....	Holland-America Line.....	February 4.....	February 5.....	7	290
Pastores.....	United Fruit Co.....	February 4.....	February 5.....	364	16 $\frac{1}{2}$
Metapan.....	United Fruit Co.....	February 4.....	February 5.....	589	382
Santa Marta.....	United Fruit Co.....	February 4.....	February 5.....	15	734
Santa Barbara.....	Grace Line.....	February 5.....	February 6.....	213	104
Benjamin Franklin.....	Fred Olsen & Co.....	February 5.....	February 6.....	(¹)	663
Tascalusa.....	Standard Transportation Co.....	February 5.....	February 7.....	8,723	(¹)
City of Panama.....	Panama Mail S. S. Co.....	February 5.....	February 5.....	1,659	
Manizales.....	North German Lloyd.....		February 6.....		198 $\frac{1}{2}$
Fella.....	Nav. Libera Triestina.....	February 6.....	February 6.....	126	(¹)
Albert Voegler.....	Hamburg-American Line.....	February 6.....	February 6.....	33	19
Atlantida.....	Standard Fruit & S. S. Co.....	February 6.....	February 7.....	316	418
Wyoaming.....	French Line.....	February 6.....	February 6.....	43	91
Oropesa.....	Pacific Steam Navigation Co.....	February 6.....	February 6.....	65	66
Bogota.....	United Fruit Co.....	February 6.....	February 7.....	56	$\frac{1}{2}$
Ares.....	Royal Netherlands S. S. Co.....	February 6.....	February 7.....	165	85
Caldas.....	National Navigation Co.....	February 6.....	February 7.....	300	(¹)
Orita.....	Pacific Steam Navigation Co.....	February 6.....	February 7.....	(¹)	201
Swiftwind.....	C. D. Malloy & Co.....	February 6.....	February 6.....	12,362	
Santa Rita.....	Grace Line.....	February 7.....	February 7.....	120	228
Iriona.....	United Fruit Co.....	February 7.....	February 7.....	90	190
Parismina.....	United Fruit Co.....	February 7.....	February 7.....	463	
Rugia.....	Hamburg-American Line.....	February 7.....	February 7.....	$\frac{1}{2}$	

¹ No cargo discharged.² No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending February 7, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Santa Teresa.....	Grace Line.....	January 23.....	January 24.....	1	
La Perla.....	United Fruit Co.....	January 24.....	January 24.....		101
Nosa Princee.....	N. O. & S. A. S. S. Co.....	January 26.....	January 26.....	60	15
San Jose.....	United Fruit Co.....	January 26.....	January 26.....	83	
Charles E. Harwood.....	Pan-American Petroleum Co.....	January 28.....	January 30.....	2,532	
Colombia.....	Panama Mail S. S. Co.....	January 28.....	January 28.....	52	11
Venezuela.....	Panama Mail S. S. Co.....	January 28.....	January 29.....	42	
Manizales.....	North German Lloyd.....	January 28.....	January 28.....	1	
Theodore Roosevelt.....	Fred Olsen & Co.....	January 29.....	January 29.....		1
Cauca.....	National Navigation Co.....	January 30.....	January 31.....		2
Santa Inez.....	Grace Line.....	January 31.....	January 31.....	135	5
Takaoka Maru.....	Nippon Yusen Kaisha.....	February 2.....	February 3.....	185	
Saramacca.....	United Fruit Co.....	February 2.....	February 3.....	89	
Tahebec.....	Standard Transportation Co.....	February 4.....	February 6.....	8,300	
Pennsylvania.....	Panama-Pacific Line.....	February 6.....	February 6.....		186

Cable address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors.

The rates are as follows:

(a) For handling cargo from ship's side to storage place, \$1 per ton of 2,000 pounds or 40 cubic feet on general merchandise, and one-half of the transfer rates provided by Item 34, Panama Canal Tariff No. 10, on other commodities.

(b) For handling cargo from storage place to ship's side, *i. e.*, for delivering or reforwarding it, the same rates as for receiving and storing, as per (a), above. The minimum charge for handling any shipment taken out of storage is \$1.

(c) For storage: First 35 days free; thereafter, 3 cents per day or fraction thereof per ton of 2,000 pounds or $1\frac{1}{2}$ cents per day or fraction thereof per ton of 40 cubic feet.

Special rates on special commodities in large quantities may be obtained on request.

Various lines operating out of Cristobal and Balboa to the west coast of Central and South America will accept their proportion of the through rate for the haul beyond the Isthmus, as explained in the following paragraph:

By virtue of the Canal Zone for Orders arrangement shippers are enabled to consign cargo to the Isthmus and subsequently to reconsign it to any port beyond the Isthmus to which there is a through rate from port of origin without sacrificing their right to the through freight rate. This means that when a shipment moves from, say, New York to the Canal Zone, usual local rates will be charged to Cristobal or Balboa, as the case may be; but should the owner wish to reforward to any other port to which there is a through rate from port of origin, he may do so upon payment of the receiving carrier's proportion of the through rate from port of origin to port of ultimate destination, and upon evidence that the shipment, or any part of it, has moved beyond the Isthmus, the initial carrier will refund the difference between its proportion of the through rate applicable and the local rate.

In addition to reconsigning beyond the Isthmus, cargo billed Cristobal for Orders may be reconsigned to Panama City or line points on the Panama Railroad on the basis of through rates from port of origin to Panama City. In this case the Panama Railroad Company's charges will be the difference between the rate charged to Cristobal by the ocean carrier and the through rate from port of origin to Panama City, and the necessary adjustments with the ocean carrier will be made by the Panama Railroad Company without inconvenience to shippers or consignees. The handling charge from storage place to cars is the same as from storage place to ship's side.

Cargo deposited in Hold for Orders Warehouse, Cristobal, which consignees desire transferred to Hold for Orders Warehouse, Balboa, will be assessed a charge of \$1 per ton on general cargo and one-half the transfer rates on other commodities for handling from the warehouse into cars at Cristobal, and a second charge of the same kind for handling from cars into warehouse at Balboa. The same charge will again apply when the cargo is reforwarded from, or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on Hold for Orders cargo discharged from vessels at Balboa.

Cargo consigned to Hold for Orders, Balboa, arriving at Cristobal piers, and/or cargo consigned to Hold for Orders, Cristobal, on which by previous arrangement the destination has been changed to Hold for Orders, Balboa, prior to arrival of the vessel, will be assessed one handling charge of \$1 per ton on general cargo or one-half of the transfer rates on other commodities for handling from shipside across piers and into cars at Cristobal and from cars into the Hold for Orders Warehouse, Balboa. The same charge will apply when the cargo is reforwarded from or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on cargo moving in the opposite direction.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," will be supplied on request to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., February 18, 1931. No. 29.

Origin and Destination of Cargo Passing Through the Panama Canal During Calendar Year 1930.

Cargo tonnage through the Panama Canal during the calendar year 1930, totaling 27,847,941 tons, showed a decrease of 3,602,552 tons, or 11.5 per cent, in comparison with the previous year. Of this decrease, there was a decline of 2,101,773 tons, or 20.7 per cent, in the Atlantic to Pacific movement, while in the opposite direction tonnage fell off 1,500,770 tons, or 7.1 per cent. The heavy decrease in the former was due to a general decline of practically all the leading commodities usually routed in this direction. While the Pacific to Atlantic showed increases in several commodities, others, particularly nitrates and lumber, registered heavy losses in comparison with 1929.

In another part of this issue (pages 412 to 415) will be found tables showing in detail the origin and destination of all cargo tonnage passing through the Canal in the calendar year ended December 31, 1930. This tonnage, segregated according to direction, as compared with the calendar year 1929, and the decreases and percentages of decrease, are shown in the following tabulation:

	Calendar year, 1929.	Calendar year, 1930.	Decrease.	
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>	<i>Per cent.</i>
Atlantic to Pacific.....	10,166,211	8,064,438	2,101,773	20.7
Pacific to Atlantic.....	21,284,282	19,783,503	1,500,779	7.1
Total.....	31,450,493	27,847,941	3,602,552	11.5

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-four and nine-tenths per cent of the cargo moving from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 25 per cent in Europe, these two areas contributing to about 90 per cent of the cargo moving from the Atlantic to the Pacific. Tonnage originating in the United States decreased 1,372,810 tons, or 20.8 per cent, in comparison with that coming from that area in 1929, although its proportion to the total cargo in this direction was approximately the same in both years. Tonnage from Europe decreased 583,100 tons, or 22.5 per cent, as compared with the previous year, while its proportion to the total was also approximately the same in both years.

Destination.—Forty-two and three-tenths per cent of all cargo moving from the Atlantic to the Pacific was destined to the United States; 22.3 per cent to Asia; 14.8 per cent to South America; and 13.2 per cent to Australasia. Tonnage to all these areas declined in comparison with 1929, as follows: To the United States, 895,176 tons, or 20.8 per cent; to Asia, 300,985 tons, or 14.3 per cent; to South America, 386,067 tons, or 24.5 per cent; and to Australasia, 406,611 tons, or 27.7 per

cent. The proportion of the total cargo destined to Asia was greater in 1930 than in 1929, while that destined to the other areas was slightly less.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 52.8 per cent originated in the United States; 25.0 per cent in South America; 11.5 per cent in Canada; 4.8 per cent in Asia; and 4.8 per cent in Australasia. Tonnage from the United States decreased 487,930 tons, or 4.5 per cent, in comparison with 1929, and that from South America and Canada decreased 1,284,207 tons, or 20.6 per cent, and 4,353 tons, or 0.19 per cent, respectively. In relation to the total cargo, that from the United States and Canada showed slight increases, while that from South America decreased. Tonnage to Asia and Australasia increased 96,027 tons, or 11.2 per cent, and 134,828 tons, or 16.6 per cent, respectively, and also showed increases in their relation to the total cargo.

Destination.—Segregated according to destination, 56.3 per cent of the cargo moving from the Pacific to the Atlantic during the year was destined to the eastern and Gulf seaboard of the United States, and 37.5 per cent to Europe. Tonnage to the United States decreased 935,063 tons, or 7.7 per cent, and to Europe decreased 562,657 tons, or 7.1 per cent. Both these areas absorbed approximately the same proportion of the total cargo in 1930 as in 1929.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

Manufacturers of iron and steel, consisting of 1,661,315 tons, comprised the principal class of cargo from the Atlantic to the Pacific during 1930. With the exception of two items (scrap metal and phosphates) all the leading commodities normally routed in this direction showed decreases in comparison with the previous year owing to depressed business conditions.

From the cargo declarations submitted it was possible to classify approximately 87 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific during 1930. The remaining 13 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo." Commodities which aggregated more than 100,000 tons in this direction in either the calendar year 1929 or 1930 are listed in the following tabulation, showing the increase or decrease:

Commodity.	Calendar year, 1929.	Calendar year, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia.....	135,767	112,126	-23,641
Asphalt.....	102,277	87,622	-14,655
Automobiles.....	244,948	137,649	-107,299
Canned goods (fish, fruit, vegetables, etc.).....	122,739	106,405	-16,334
Cement.....	477,734	287,524	-190,210
Coal and coke.....	236,335	157,989	-78,346
Cotton.....	257,508	245,168	-12,340
Manufactured goods:			
Iron and steel.....	2,374,926	1,661,315	-713,611
Machinery.....	195,036	163,043	-31,993
Railroad material.....	221,085	129,275	-91,810
Tinplate.....	287,907	273,401	-14,506
Textiles.....	129,334	107,220	-22,114
Miscellaneous.....	185,382	129,781	-55,601
Metals (iron, lead, etc.).....	119,637	73,732	-45,855
Metal, scrap.....	122,518	143,754	+21,236
Oils, mineral.....	788,536	609,276	-179,260
Paper.....	251,400	234,956	-16,444
Phosphates.....	309,817	424,551	+114,734
Sugar.....	138,182	120,568	-17,614
Sulphur.....	239,147	218,214	-20,933
Tobacco.....	103,023	109,463	+6,440

The above 21 commodity groups comprise approximately 67 per cent of the cargo moving from the Atlantic to the Pacific during the calendar year 1930.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

As in the past several years the heaviest item of cargo moving from the Pacific to the Atlantic was mineral oils, the shipments of which in 1930 totaled 5,521,845 tons, or 27.9 per cent of the total cargo moving in this direction. Lumber, ores, wheat, and nitrates, were next in order with 3,126,877 tons, 2,003,975 tons, 1,839,836 tons, and 1,482,620 tons respectively. With the exception of ores (which made a slight gain), all these items decreased in comparison with the calendar year 1929, the most outstanding of which was in nitrates which declined 1,055,095 tons, or 41.6 per cent. Among the smaller items several increases were made, the more important of which included cold storage products, paper and pulp, and sugar.

Of the cargo reported during the year it was possible to classify 98.5 per cent of the total in transit through the Canal from the Pacific to the Atlantic. Commodities which aggregated more than 100,000 tons either in 1929 or 1930, with the increase or decrease, are listed below:

Commodity.	Calendar year, 1929.	Calendar year, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	268,729	233,231	-35,498
Beans.....	134,616	108,392	-26,224
Canned goods (fish, fruit, vegetables, etc.).....	847,496	854,290	+6,794
Coffee.....	141,228	150,936	+9,708
Cold storage (food products) *.....	317,914	372,715	+54,801
Copra.....	111,621	94,232	-17,389
Cotton.....	93,497	110,343	+11,846
Flour.....	101,475	117,448	+16,023
Fruit, dried.....	239,451	234,067	-5,384
Fruit, fresh.....	207,361	179,377	-27,984
Lumber.....	3,399,393	3,126,877	-272,516
Metals (principally copper).....	665,755	582,504	-83,251
Nitrates.....	2,537,715	1,482,620	-1,055,095
Oils, mineral.....	5,712,461	5,521,845	-190,616
Ores (principally iron).....	1,993,717	2,003,975	+10,258
Paper.....	78,895	116,534	+37,639
Paper pulp.....	88,341	115,635	+27,294
Rice.....	106,385	105,970	-435
Sugar.....	880,308	921,864	+41,556
Wheat.....	1,901,157	1,839,836	-61,321
Wool.....	157,099	149,117	-7,982

* Fresh fruit not included.

The above 21 commodity groups comprise over 93 per cent of the cargo moving from the Pacific to the Atlantic during the calendar year 1930.

(Continued on next page.)

Large Silk Cargo on California.

An item in THE PANAMA CANAL RECORD of December 3, 1930, reported the growing use of the Panama Canal in the shipment of raw silk from the Orient to the New York market. The master of the *California*, of the Panama Pacific Line, on the last transit of that vessel on February 3, 1931, en route from California to New York, reported 1,723 tons of raw silk as one of the principal items of a total cargo of 7,700 tons. This is believed to constitute the heaviest item of raw silk yet to have passed through the Canal in one transit.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, During the Calendar Year 1930.—Continued from page 411.
(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.					SOUTH AMERICA.					Total, South America.	
	West coast of United States.	West coast of Canada.	West coast of Central America.	Balboa, C. Z. ²	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Ecuador.	Peru.		West coast of South America. ¹
NORTH AMERICA:												
UNITED STATES—												
North Atlantic ports.....	2,093,237	11,177	30,856	1,049	107,733	2,244,032	132,893	8,220	7,441	52,835	62,266	263,695
South Atlantic ports.....	46,149	5				46,154	2,689	60	18	5	2,758	5,130
Gulf ports.....	556,134	25,118		9,518	810	591,580	30,925	2,411	2,521	4,476	1,745	42,078
Total, United States.....	2,695,520	36,300	30,856	10,567	103,543	2,881,786	166,507	10,731	9,980	57,316	63,369	310,903
East coast of Canada.....	8,965	45,715	175			54,855						
East coast of Central America.....	246		6,865	160		7,301	31,297					31,297
Cristobal, C. Z. ²	36,101	465	52,973	78		89,617	17,865	11,654	9,961	9,154	10,493	50,567
West Indies.....	20,865	41,416	20	10,267		72,568	41,381		18,092	32	11	59,516
Total, North America.....	2,761,697	123,896	90,919	21,072	108,543	3,106,127	257,050	22,385	38,033	66,502	77,313	461,283
EUROPE:												
British Isles.....	67,118	64,138	4,537	66		135,859	130,386	424	3,105	27,612	62,155	223,682
Belgium.....	159,074	28,785	6,478	639		198,116	58,206	3,176	2,743	9,876	17,284	91,283
Denmark.....	2,614	43	316	5	3,140	2,978	2,978		501	375	1,734	1,493
France.....	25,286	6,098	1,241			32,625	12,632	38	425	1,431	6,374	20,741
Germany.....	70,156	5,125	5,242	1,569	9,477	91,619	21,404	3,814	2,594	9,738	8,759	49,330
Holland.....	44,930	10,760	1,055	1,925		56,745	19,285	597	2,434	12,614	3,400	44,021
Italy.....	12,889	3,707	2,974			19,765	1,077		301	301	16,983	18,361
Norway and Sweden.....	63,967	1,575	13,649	12,578		91,773	30,092	4,058	3,132	1,830	21,116	60,228
Spain and Portugal.....	3,829	10,148	709	1,567	4	16,343	362			169	1,287	2,287
Europe.....	85,720	11,626	11,684	1,492		110,522	28,893	2,367	1,300	7,358	177,285	217,203
Total, Europe.....	535,283	142,005	43,970	18,986	12,621	755,865	311,411	14,474	16,234	71,295	314,226	727,640
East coast of South America.....	117,690	34,613	91	106		152,500		2,495	35		474	3,004
AFRICA:												
Grand total, 1930.....	3,414,670	300,514	137,930	40,164	121,164	4,014,492	568,461	39,854	54,302	137,797	392,013	1,191,927
Grand total, 1929.....	4,309,816	278,163	260,668	50,063	123,862	5,022,602	734,407	100,391	44,816	217,326	481,054	1,577,994
Per cent of total cargo, 1930.....	42.3	3.7	1.7	0.5	1.5	49.7	7.0	0.5	0.7	1.7	4.9	14.8
Per cent of total cargo, 1929.....	42.4	2.7	2.6	0.5	1.2	49.4	7.2	1.0	0.4	2.1	4.7	15.4

¹ General cargo not routed so as to allow segregation between definite ports.
² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, During the Calendar Year 1930.

(Figures represent tons of 2,240 pounds.)

From—	AUSTRALASIA.				ASIA.				GRAND TOTAL.		Per cent of total cargo 1930.	Per cent of total cargo 1929.	
	Australia.	New Zealand.	Australasia.	Total Australasia.	Philippine Islands.	China.	Japan.	Far East.	Total, Asia.	1930.			1929.
NORTH AMERICA:													
UNITED STATES—													
North Atlantic ports.....	139,925	60,790	7,354	208,069	138,689	219,284	330,757	194,645	883,375	3,599,191	4,721,434	44.6	46.4
South Atlantic ports.....	798	1,605	2,403	2,403	2,300	12,687	64,996	11,441	91,424	145,111	141,714	1.8	1.4
Gulf ports.....	63,461	18,332	12,627	94,420	8,750	129,877	470,254	153,311	764,222	1,492,300	1,746,264	18.5	17.2
Total, United States.....	204,184	80,727	19,931	304,892	149,769	361,843	896,007	361,397	1,739,021	5,236,602	6,609,412	64.9	65.0
East coast of Canada.....	29,435	53,092	7,599	95,126		4,012	7,941		11,953	161,934	226,362	2.0	2.2
East coast of Central America.....	56,268	129	7,200	63,597						102,195	99,301	1.3	1.0
Cristobal, C. Z., ¹	1		101	102		5	11		16	149,302	246,985	1.8	2.4
West Indies.....		48,432	7,100	55,532		13,060			13,060	200,676	199,541	2.5	2.0
Total, North America.....	289,888	187,380	41,931	519,249	149,769	378,925	873,959	361,397	1,764,030	5,850,709	7,381,601	72.5	72.6
EUROPE:													
British Isles.....	8,296	413,203	21,801	413,300						816,641	1,008,476	10.1	9.9
Belgium.....	1,800	43,650	2	45,450		777		7,800	7,800	335,640	526,918	4.2	5.2
Denmark.....			2	2				12	12	4,473	9,579	0.1	0.1
France.....			12,159	12,159						65,525	94,306	0.8	0.9
Germany.....			16	16						140,974	222,781	1.7	2.2
Holland.....						767		767	767	101,533	109,063	1.2	1.0
Italy.....										37,646	46,662	0.5	0.5
Norway and Sweden.....	11,232	5,080		16,312						168,313	213,011	2.1	2.1
Spain and Portugal.....										17,630	11,689	0.2	0.1
Europe ¹			2,862	2,862						330,587	353,077	4.1	3.5
Total, Europe.....	21,328	461,983	36,840	520,101		1,544		7,812	9,356	2,012,962	2,596,062	25.0	25.5
East coast of South America.....													
Africa.....			21,983	21,983	66	392	7,260	22	7,740	163,244	152,971	2.0	1.5
Grand total, 1930.....	311,216	671,296	78,821	1,061,333	149,835	380,861	896,759	369,231	1,796,686	8,064,438	10,166,211	100.0	100.0
Grand total, 1929.....	531,988	848,362	87,594	1,467,944	202,150	437,034	1,092,732	315,705	2,097,671				
Per cent of total cargo, 1930.....	3.9	8.3	1.0	13.2	1.9	4.7	11.1	4.6	22.3				
Per cent of total cargo, 1929.....	5.2	8.4	0.9	14.5	2.0	4.8	10.8	3.1	20.7				

¹ General cargo not routed so as to allow segregation between definite ports.

² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Pacific to the Atlantic, During the Calendar Year 1930.
(Figures represent tons of 2,240 pounds.)

From--	NORTH AMERICA.										EUROPE.					
	United States.					East coast of Canada.	East coast of Central America.	Cristobal, C. Z. *	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	
	North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total, United States.	Total, United States.											
NORTH AMERICA:																
West coast of United States...	6,368,880	96,492	400,856	6,866,178	9,435	15,520	42,790	226,398	7,160,321	1,745,478	53,500	11,806	158,801	308,800		
West coast of Canada...	328,475		3,519	331,994	124,359	760	630	44,030	501,773	833,331	41,005	9,690	29,275	65,765		
West coast of Central America	4,681			4,681	63		52,641	2,199	59,584	1,011			3,559	8,267		
Bahoa, C. Z.	308		634	942			229		1,171							
Hawaiian Islands.....	73,013		49,000	116,013					116,013	1,952	278	159				
Total, North America.....	6,775,307	96,492	448,009	7,319,808	133,794	16,343	96,290	272,627	7,838,862	2,581,772	94,783	21,655	191,635	382,832		
SOUTH AMERICA:																
Chile.....	1,913,716	171,496	157,588	2,242,800		2,454	6,365	22,644	2,274,263	206,908	43,806	2,972	46,091	42,808		
Colombia.....	17,635		1,481	19,116			40,137	176	59,429	3	3		93	159		
Ecuador.....	161,245		4	161,249	15,710		31,902	66	203,927	840	42	66	1,484	1,484		
Peru.....	270,074		4,004	274,078	305,965	305	2,242	198	583,718	157,087	18,555	7,617	24,983	75,291		
West coast of South America	15,889		2,000	17,889			13,013	207	31,059	11,761	321	1,307	53	1,546		
Total, South America.....	2,378,509	176,426	163,077	2,718,012	321,675	2,759	93,659	23,291	3,159,396	376,596	62,727	11,962	72,704	121,249		
AUSTRALASIA:																
Australia.....	176,491			176,491	17,412		82		193,985	15,457			5,000			
New Zealand.....	22,827	10,238		33,065	9,664		468		43,197	496,207	4		15,621	65		
Australasia.....	62,414		4,400	66,814					66,814	50,672	4,540					
Total, Australasia.....	261,732	10,238	4,400	276,370	27,076		550		303,996	562,336	4,544		20,621	1,113		
ASIA:																
Philippine Islands.....	549,645		141,437	694,082			6,674	15,060	694,082							
China.....	50,027		1,229	51,256					72,990	850						
Japan.....	55,767	1,019	2,589	59,375			208	51,712	69,615	40,945						
Far East.....	24,458		394	24,852		166			76,938							
Total, Asia.....	679,897	1,019	148,649	829,565		166	7,772	76,122	913,625	41,795						
Grand total, 1930.....	10,095,445	284,175	764,135	11,143,755	482,545	19,268	198,271	372,040	12,215,879	3,562,499	162,034	33,617	284,960	505,194		
Grand total, 1929.....	10,643,267	425,852	1,009,699	12,078,818	576,788	23,819	199,516	276,285	13,155,226	3,596,777	252,491	67,910	373,833	590,758		
Per cent of total cargo, 1930.....	51.0	1.4	3.9	56.3	2.4	0.1	1.0	1.9	61.7	18.0	0.8	0.2	1.4	2.6		
Per cent of total cargo, 1929.....	50.0	2.0	4.7	56.7	2.8	0.1	0.9	1.3	61.8	16.9	1.2	0.3	1.8	2.7		

* Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Pacific to the Atlantic, During the Calendar Year 1930.

(Figures represent tons of 2,240 pounds.)

From—	EUROPE.										East coast of South America.	Egypt.	Africa.	GRAND TOTAL.		Per cent of total cargo 1930.	Per cent of total cargo 1929.	
	Holland.	Italy.	Norway and Sweden.	Russia.	Spain and Portugal.	Europe. ¹	Total Europe.	1930.	1929.									
										1930.				1929.				
NORTH AMERICA:																		
West coast of United States...	121,262	39,989	42,122	5,285	7,220	711,498	3,205,761	65,181	5,342	10,437,206	10,925,136	52.8	51.3					
West coast of Canada...	70,470	18,027	55,127		26,651	587,827	1,746,568	18,890	3,520	2,270,751	2,275,104	11.5	10.7					
West coast of Central America	641	658	5,144		13,800	6,275	39,355	504		99,443	91,050	0.5	0.4					
Balboa, C.Z.								180		1,351								
Hawaiian Islands.	509	447					3,336			119,349	84,237	0.6	0.4					
Total, North America....	192,873	59,121	102,393	5,285	47,071	1,315,600	4,995,020	84,755	8,862	12,928,100	13,375,527	65.4	62.8					
SOUTH AMERICA:																		
Chile.....	6,318	10,849	6,075	64,820	1,974	794,812	1,227,433	684		3,572,634	4,756,630	18.1	22.3					
Colombia.....					400	23	678	8		60,111	63,376	0.3	0.3					
Ecuador.....	372	4,047	137	238	4,411	13,082	861	4		222,870	194,847	1.1	0.9					
Peru.....	16,008	4,596	40,037	551		110,965	452,290	8		1,038,016	1,140,416	5.2	5.4					
West coast of South America		796				12,706	28,490			59,549	82,118	0.3	0.4					
Total, South America....	23,298	16,288	46,249	64,820	3,163	922,917	1,721,973	1,557		4,953,180	6,237,387	25.0	29.3					
AUSTRALASIA:																		
Australia.....						8,650	20,457	3		214,445	141,315	1.1	0.7					
New Zealand.....	891		20,000			23,718	91,616			569,997	520,440	2.9	2.4					
Australasia ¹										161,430	146,289	0.8	0.7					
Total, Australasia....	891		20,000			32,368	611,873	3		945,872	811,044	4.8	3.8					
ASIA:																		
Philippine Islands.....							850			694,082	597,582	3.5	2.9					
China.....										73,840	95,472	0.4	0.4					
Japan.....										69,615	45,468	0.3	0.2					
Far East ¹							40,945	931		118,814	121,802	0.6	0.6					
Total, Asia.....							41,795	931		956,351	860,324	4.8	4.1					
Grand total, 1930.....	217,062	75,409	168,642	70,105	50,294	2,270,885	7,400,661	87,246	70,855	19,783,503		100.0						
Grand total, 1929.....	297,122	103,062	147,889	10,907	123,247	2,399,382	7,963,318	59,384	100,009	21,281,282			100.0					
Per cent of total cargo, 1930.....	1.1	0.4	0.9	0.4	0.3	11.4	37.5	0.4	0.4			100.0						
Per cent of total cargo, 1929.....	1.4	0.5	0.7	0.1	0.6	11.2	37.4	0.3	0.5				100.0					

¹ General cargo not routed so as to allow segregation between definite ports.

² Includes both local and transit cargo.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, February 14, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Salt Lake City 1	7	7 05	8	00 50	8	12 48			American.	U. S. Navy.	570.0	64.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Antares 2	7	9 25	8	2 10	8	11 57			American.	U. S. Navy.	390.0	64.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Pensacola 3	7	7 05	8	4 25	8	13 53			American.	U. S. Navy.	570.0	64.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Steel Scientist 4	7	22 25	8	5 25	8	14 58	8	16 00	American.	Isthmian S. S. Lines.	424.2	56.2	26.11	Philadelphia, Pa.	Singapore Str. Set.	General.	7,946	7,611	5,454
Trenton 5	7	7 05	8	6 40	8	15 50			American.	U. S. Navy.	550.0	55.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Memphis 6	7	7 05	8	7 30	8	16 44			American.	U. S. Navy.	550.0	55.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Tai Ping Yang 7	8	1 40	8	8 45	8	17 20	8	18 15	Panamaian	Barber Wilhelmsen Line	460.0	60.0	19.0	New York, N. Y.	Shanghai, China.	General.	2,187	9,866	6,955
Marblehead 8	7	7 05	8	9 25	8	17 46			American.	U. S. Navy.	550.0	55.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Richmond 9	7	7 05	8	10 15	8	18 30			American.	U. S. Navy.	550.0	55.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Enslay City 10	8	5 25	8	10 50	8	19 15	8	20 15	American.	Isthmian S. S. Lines.	395.0	55.0	20.6	Baltimore, Md.	Vancouver, B. C.	General.	4,791	7,330	5,239
Swiftwind 11	8	14 55	8	11 20	8	20 05	8	21 10	American.	Shell Oil Co.	464.6	60.2	19.2	Caracas, D. W. I.	Los Angeles, Calif.	Ballast.	3,500	6,100	4,513
Er. 12	8	7 25	8	12 30	8	20 58	8	22 00	Norwegian.	Inter-Freighting Corp.	399.0	53.0	20.0	Baltimore, Md.	Ancón, Peru.	General.	8,327	6,728	4,734
Trimountain 13	8	9 25	8	13 30	8	22 58	9	00 06	American.	Bernuth Lemboke Co.	416.0	55.0	23.6	Amsterdam, Holland	San Francisco, Cal.	Creosote.	1,012	3,848	2,603
Panama 4	5	23 45	8	14 10	8	23 00	9	00 06	American.	Panama Mail S. S. Co.	296.1	45.0	17.10	Cristobal, C. Z.	Buenaventura, Col.	General.			
Bobolink 5	7	9 25	9	4 10	9	12 20			American.	U. S. Navy.	180.0	36.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Vestal 6	7	9 25	9	4 25	9	12 26			American.	U. S. Navy.	450.0	60.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Detroit 7	7	7 05	9	6 20	9	14 04			American.	U. S. Navy.	550.0	55.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Wright 8	7	2 30	9	6 35	9	15 12			American.	U. S. Navy.	438.0	55.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Raleigh 9	7	7 05	9	7 48	9	16 12			American.	U. S. Navy.	550.0	55.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Milwaukee 10	7	7 05	9	8 45	9	17 30			American.	U. S. Navy.	550.0	55.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Port Brisbane 11	9	4 00	9	9 40	9	17 56	9	19 00	British.	Com. th. & Dom. Line.	481.0	62.0	23.2	New York, N. Y.	Premantle, Aust. th.	General.	1,399	10,708	7,384
Contoocook 12	7	9 35	9	9 20	9	17 27			American.	U. S. Navy.	149.0	30.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Rail 5	7	9 35	9	9 20	9	17 27			American.	U. S. Navy.	180.0	35.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Breckenridge No. 148 9	7	9 00	9	10 50	9	18 34			American.	U. S. Navy.	310.0	30.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Crownshield No. 134 9	7	9 25	9	10 50	9	18 34			American.	U. S. Navy.	310.0	30.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Barbara Castles 9	8	22 05	9	10 40	9	19 54	9	21 00	American.	Sudden & Christenson.	469.5	54.2	17.0	Baltimore, Md.	Seattle, Wash.	General.	2,362	6,604	4,852
Yorkman 9	9	9 00	9	11 35	9	21 01	9	22 09	American.	Calmar S. S. Line.	469.8	54.2	23.0	Baltimore, Md.	Seattle, Wash.	Steel, general.	6,680	6,757	4,802
Robin 9	9	11 15	9	12 35	9	21 04			American.	U. S. Navy.	180.0	35.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Manley No. 74 9	7	9 00	9	12 35	9	21 40			American.	U. S. Navy.	310.0	30.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Dallas No. 199 9	7	9 00	9	12 35	9	21 40			American.	U. S. Navy.	310.0	30.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Point Garda 9	10	10 10	9	12 35	9	21 50	9	22 56	American.	Swayne & Hoyt.	324.0	46.0	21.0	Corpus Christi, Tex.	Seattle, Wash.	General.	3,303	3,684	2,643
City of Dieppe 9	10	10 30	9	13 45	9	23 30	9	23 50	Colombian.	Ellerman & Bucknall.	469.0	58.0	25.0	New York, N. Y.	Sydney, Australia.	General.	1,298	9,321	6,789
Caica 4	8	19 50	9	13 35	9	22 24	10	1 46	Colombian.	National Navigation Co.	107.0	22.0	8.6	Cristobal, C. Z.	Buenaventura, Col.	General.	93	262	161

1 Tanker. 2 Cruiser. 3 Auxiliary. 4 Motor ship. 5 Mine sweeper. 6 Repair ship. 7 Aircraft tender. 8 Destroyer. 9 Lumber, pipe and general.

Ship Name	Tonnage	Company	Origin	Destination	Agent	Remarks
Ellis No. 154	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
J. Fred Talbot	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
Bernadou	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
No. 153	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
Cole No. 155	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
Hopkins	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
No. 249	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
Schenck	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
No. 159	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
Herbert	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
No. 160	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
Dickenson	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
No. 157	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
Barry No. 248	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
Williamson	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
No. 244	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
Childs No. 241	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
Gilmer No. 233	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
Concord	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
Hale No. 133	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
Barney	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
No. 149	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
Quails	7	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	
Santos Maru	9	Osaka Shosen Kaisha	Cristobal, C. Z.	Balboa, C. Z.	Ballast	3,476
Brilliant	10	Standard Transp. Co.	Buenos Aires, Arg.	Kobe, Japan	General	7,875 5,821
Pacific Br.	10	Dimon S. S. Corp.	Boston, Mass	Los Angeles, Calif.	Ballast	9,772 6,712
Schwaben	10	North German Lloyd	Philadelphia, Pa.	Tacoma, Wash.	General	4,489
Knutte Nelson	10	Fred Olsen & Co.	Hamburg, Germany	Vancouver, B. C.	General	2,555 10,002 6,743
Euador	9	Panama Mail S. S. Co.	Oslø, Norway	Vancouver, B. C.	General	3,986 8,016 5,854
Annie Johnson	10	Johnson Line	New York, N. Y.	San Francisco, Cal.	General	2,551 5,936 4,178
Lark	10	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	2,257 6,650 4,919
Atlantic Maru	10	Kokusai Kisen Kaisha	Jacksonville, Fla.	Shanghai, China	Cotton, rosin	4,391 6,251 4,700
Nablin	9	Lady Yule	Greenock, England	Galapagos Island	Ballast	1,491 551
Baral	10	Royal Neth. S. S. Co.	Cristobal, C. Z.	Guayaquil, Ecuador	General	26 1,183 742
Hawaiian	11	Amer-Hawaiian Line	Boston, Mass	Seattle, Wash.	General	2,274 4,767
West Nilus	11	McCormick S. S. Co.	Rosario, Arg.	Vancouver, B. C.	General	3,753 6,551 4,989
Robert	11	Lukenbach Line	Boston, Mass	Seattle, Wash.	General	3,444 8,695 6,375
Teal	10	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	9,476 12,217 8,519
Cornwall	11	N. Z. Shipping Co.	Antwerp, Belgium	Auckland, N. Z.	Basic slag	1,797 7,756 5,378
Nuria	11	North German Lloyd	Hamburg, Germany	Valparaiso, Chile	General	2,569 10,772 7,581
Lechmonar	11	Royal Mail S. P. Co.	Rotterdam, Holl'd.	Vancouver, B. C.	General	9,328 5,513
Reginotte	11	Imperial Oil Co.	Baltimore, Md.	Los Angeles, Calif.	Ballast	1,270 5,208 3,578
Sandpaper	12	U. S. Navy	Guantanamo, Cuba	Balboa, C. Z.	Ballast	1,802 10,332 7,466
Hazel Branch	12	F. & W. Ritson	Liverpool, England	Valparaiso, Chile	General	8,840 8,400 6,162
Oregon	12	French Line	Dunkirk, France	Vancouver, B. C.	General	249 211 124
San Julian	12	Pacific-Atlantic Co.	London, England	Vancouver, B. C.	General	7,265 5,199
San Juan	10	National Navigation Co.	Bocas R. P.	Buenaventura, Col.	Gen., steel ties	
Caldas	10	National Navigation Co.	Bocas R. P.	Buenaventura, Col.	Gen., steel ties	
Nuolja	12	Grangesberg & Co.	New Orleans, La.	Vancouver, B. C.	Ballast	

** Yacht.
 ** Cement, paper, and general.

* Tanker

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Tons.	Net.		
Bessie J. ¹³	12	9.55	12	18.09					American.	Frank Judd.	381.4	53.8	19.6	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	16	14	
Fernmore ¹⁴	12	19.50	12	9.30	13	10.26			Norwegian.	Fern Line.	400.6	62.8	19.0	New Orleans, La.	Shanghai, China.	General.	4,460	4,530	
Tekoa.	13	2.30	13	6.35	13	14.09	13	19.15	British.	N. Z. Shipping Co.	400.6	62.8	19.0	Liverpool, England	Wellington, N. Z.	Ballast.	10,570	7,621	
David.	13	5.00	13	7.00	13	15.18	13	16.30	American.	Tidewater Oil Co.	430.0	59.2	21.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	7,620	5,325	
Teno.	12	19.15	13	8.55	13	16.02	13	17.30	Chilean.	Ca. Std. Amer. de Vap.	421.8	56.0	24.9	New York, N. Y.	Valparaiso, Chile.	General.	1,382	7,764	
Edw. P.			13	9.05	13	16.46			American.	U. S. Army.	101.0	23.5		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
Notes ¹⁵ .																			
Pacific	12	2.20	13	9.50	13	16.37	13	17.40	British.	Furness, Withy & Co.	435.0	69.0	19.5	Glasgow, Scotland	Vancouver, B. C.	Gen., bananas.	1,262	9,725	
Ranger ¹⁴ .	13	10.35	13	10.50	13	18.27	13	19.50	American.	Nelson Line.	380.0	53.2	19.0	New York, N. Y.	Seattle, Wash.	General.	1,895	5,653	
Sacramento.	13	11.05	13	11.15	13	19.25	14	1.09	Japanese.	Mitsui Bussan Kaisha.	385.0	51.0	23.0	Tampa, Fla.	Yokohama, Japan.	General.	7,060	6,207	
Iwatesan Maru.	15	22.55	14	09.05	14	9.10	14	9.55	Italian.	General S. S. Co.	405.0	53.9	16.0	Rotterdam, Holland	Seattle, Wash.	Ballast.	6,304	4,421	
Edla.	13	18.05	14	3.00	14	11.05	14	17.50	American.	Grace Line.	360.2	51.6	21.0	New York, N. Y.	Valparaiso, Chile.	General.	1,505	5,726	
Santa Teresa.	10	18.50	14	6.15	14	14.05	15	1.58	American.	United Fruit Co.	330.6	44.6	16.10	Cristobal, C. Z.	San Francisco, Calif.	Ballast.	3,683	2,373	
Esparta.	2	23.20	14	6.00	14	14.05	14	15.40	German.	Hamburg-American Line	416.0	56.0	20.0	New York, N. Y.	Guayaquil, Ecuador	General.	120	1,633	
Durazzo.	14	6.20	14	6.40	14	14.59	14	16.00	American.	The Texas Co.	550.0	54.0		New York, N. Y.	Los Angeles, Calif.	Ballast.	6,756	4,844	
Peninsulari ¹⁶ .	14	5.55	14	8.30	14	16.00			American.	U. S. Navy.				Guantanamo, Cuba	Balboa, C. Z.	Ballast.			
Canadian	14	9.00	14	9.10	14	17.30	17	00.20	British.	Can. Nat. Steamships	430.0	56.0	19.6	Halifax, N. S.	Adeelaide, Australia.	General.	2,115	7,680	
Constructor.	14	1.55	14	13.10	14	21.23	14	22.30	British.	Shaw, Savill & Albion.	477.8	61.1	28.6	London, England.	Wellington, N. Z.	General.	3,175	10,857	
Tainui.	14	1.55	14	6.15	14	15.12			American.	U. S. Navy.	180.0	35.6		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
Swan ¹⁷ .	14	1.25	14	23.50	15	9.11	15	17.30	American.	N. O. & S. A. S. Co.	324.0	46.0	18.0	New Orleans, La.	San Antonio, Chile.	General.	1,748	3,978	
Nosa King.	14	1.25	14	23.50	15	9.11	15	17.30	American.	N. O. & S. A. S. Co.	324.0	46.0	18.0	New Orleans, La.	San Antonio, Chile.	General.	1,748	3,978	

¹⁸ Phosphates, cotton, and carbon black.

¹⁹ Mine sweeper.

²⁰ Cruiser.

²¹ Tug.

²² Motor ship.

²³ Launch.

²⁴ Tanker.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Tons.	Net.	
Nevada ¹ .	7	16.05	8	6.00	8	20.25	8	20.25	American.	The Texas Co.	434.8	56.2	27.0	Los Angeles, Calif.	Gas oil.	10,332	7,425	
Silver Spruce ¹⁹ .	7	18.00	8	6.20	8	21.20	9	1.50	American.	Kerr S. Co., Inc.	333.8	48.0	23.3	Olympia, Wash.	Lumber.	4,420	4,104	
San Francisco ¹⁹ .	7	22.00	8	7.10	8	19.55	9	2.38	German.	Hamburg-American Line	432.3	59.1	25.0	Vancouver, B. C.	General.	7,160	8,454	
Canadian	8	3.30	8	8.13	8	22.35	9	1.20	British.	Can. Nat. Steamships	400.5	52.4	24.0	Chemainus, B. C.	Lumber, general.	6,074	5,891	
Importer.	8	6.51	8	8.13	8	19.50	9	13.35	Colombian.	National Navigation Co.	107.0	22.9	11.0	Buenaventura, Col.	Cristobal, C. Z.	General.	183	362
Cauca ¹⁹ .	8	5.15	8	9.07	8	23.00	11	13.20	German.	North German Lloyd.	333.0	54.0	26.1	San Antonio, Chile.	General.	7,632	6,573	
Wiegand.	8	4.00	8	10.36	9	09.25	9	3.10	British.	Stimson, Speeher, Yng.	405.0	53.5	24.0	Vancouver, B. C.	Wheat.	7,764	5,803	
Stonepool.	8	4.00	8	10.36	9	09.25	9	3.10	British.	Stimson, Speeher, Yng.	405.0	53.5	24.0	Vancouver, B. C.	Wheat.	7,764	5,803	
Rananga.	8	6.30	8	11.34	9	2.25	9	9.30	British.	Shaw, Savill & Albion.	478.0	63.2	22.2	Dunedin, N. Z.	Frozen, general.	4,940	11,070	
Nicole.	8	7.55	8	12.21	9	3.00	9	4.05	Danish.	Isbrandtsen Moller Co.	374.8	52.2	25.0	Itoilo, P. I.	Sugar, lumber.	7,450	5,928	
Maersk ^{19, 20} .	8	7.55	8	12.21	9	3.00	9	4.05	Danish.	Isbrandtsen Moller Co.	374.8	52.2	25.0	Itoilo, P. I.	Sugar, lumber.	7,450	5,928	

²⁵ Motor ship.

²⁶ Coffee, gold, platinum, and hides.

²⁷ Tanker.

²⁸ Motor ship.

²⁹ Tanker.

³⁰ Motor ship.

³¹ Tanker.

³² Motor ship.

³³ Tanker.

³⁴ Motor ship.

³⁵ Tanker.

³⁶ Motor ship.

³⁷ Tanker.

³⁸ Motor ship.

³⁹ Tanker.

⁴⁰ Motor ship.

⁴¹ Tanker.

⁴² Motor ship.

⁴³ Tanker.

⁴⁴ Motor ship.

⁴⁵ Tanker.

Canadian Victor	8	8.00	8	13.20	9	4.35	9	8.55	British	Can. Nat. Steamships	400.0	52.4	18.0	Auckland, N. Z.	Halifax, N. S.	General	815	5,956	4,172
Cabore 19	8	11.20	8	14.11	9	5.55	10	7.50	American	Calmor S. S. Corp.	490.6	57.2	27.0	Seattle, Wash.	New York, N. Y.	Lumber	10,000	8,013	4,963
Royal Arrow 1	9	4.15	9	6.18	9	19.50	9	19.50	American	Standard Transp. Co.	407.6	62.7	29.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	11,296	9,699	6,857
Solana 1	9	8.00	9	8.39	9	19.00	9	16.10	American	Tidewater Oil Co.	419.1	56.5	27.0	San Francisco, Cal.	New York, N. Y.	(*)	9,469	7,060	5,025
Georgie 1	9	8.45	9	9.42	9	21.25	10	16.10	French	French Line	410.5	57.2	27.0	Corrail, Chile.	Le Havre, France	(*)	8,030	6,830	4,932
Calitor 1a	9	9.30	9	10.36	9	13.14	11	2.20	Italian	Nav. Libera-Tristana	538.0	63.0	29.0	Vancouver, B. C.	Naples, Italy	General	10,087	13,787	9,356
Nosa Ch'if 1	9	10.50	9	11.39	9	21.50	9	23.48	American	N. O. S. A. S. S. Co.	299.4	52.6	24.0	Vancouver, B. C.	Tampa, Fla.	General	3,254	3,256	2,010
Calabal 1	9	11.09	9	12.14	9	23.13	9	23.10	American	Harrison Line	396.5	54.2	24.0	Vancouver, B. C.	Liverpool, England	General	6,800	5,753	3,893
Pacific Hemlock	9	12.45	9	13.39	9	22.40	11	6.05	British	Dimon S. S. Corp	409.7	52.6	24.0	Seattle, Wash.	Norfolk, Va.	Lumber, general	7,307	6,630	4,916
Nosa Ch'if 2	9	16.45	9	17.32	10	1.45	11	6.05	Dutch	Royal Neth. S. S. Co.	202.9	33.1	12.3	Buenaventura, Col.	Cristobal, C. Z.	(*)	401	1,182	742
British Star 1	9	14.00	9	16.05	10	19.45	10	19.45	American	Richfield Oil Corp	430.5	57.0	16.0	Los Angeles, Calif.	Trinidad, B. W. I.	Ballast	7,174	4,964	
Esparita 1	9	17.30	10	6.28	10	18.50	10	18.50	American	United Fruit Co.	330.6	66.0	29.0	San Francisco, Cal.	Bayonne, N. J.	Gasoline	13,461	9,620	6,476
Nelson Traveler	9	17.25	10	7.11	10	20.25	10	20.25	American	Nelson S. S. Co.	380.3	53.1	24.0	San Francisco, Cal.	Cristobal, C. Z.	General	1,290	6,683	3,373
Virginian 1	10	1.00	10	8.43	10	21.20	10	21.20	American	Amer-Hawaiian Line	491.5	58.2	29.0	Portland, Ore.	New York, N. Y.	Lumber, general	8,000	10,491	7,601
Soley 1	10	6.30	10	9.42	10	23.05	10	23.05	Norwegian	American Trading Co.	381.9	54.0	26.3	N. West'm'ter, B. C.	Providence, R. I.	Lumber	7,150	6,509	4,910
Pioneer 10	10	10.15	10	11.07	10	23.50	10	23.50	British	Furness, Witly & Co.	435.9	60.1	27.3	Vancouver, B. C.	London, England	General	8,605	9,630	6,943
Atlantic City 1	10	10.20	10	12.19	11	1.30	11	1.30	British	Empire Shipping Co.	425.0	54.5	28.2	Vancouver, B. C.	Falmouth, Eng.	Wheat	8,974	6,555	4,659
Lake Gortin 1	10	11.15	10	16.33	11	3.00	11	3.00	American	Ford Motor Co.	251.0	43.6	21.0	Aberdeen, Wash.	New York, N. Y.	(*)	2,789	2,692	1,808
Crown of																			
Galicia 1	10	21.50	11	6.03	11	15.05	11	16.25	British	Kerr, Gifford & Co.	370.0	53.0	24.0	Portland, Ore.	Cobb, Ireland	Wheat	6,628	3,350	3,813
Locoma 1	10	3.30	11	6.39	11	20.35	11	16.50	British	Inter. Petroleum Co.	248.2	42.7	12.0	Callao, Peru.	Cristobal, C. Z.	Ballast	1,762	1,045	
Grelstone 1	11	00.15	11	7.43	11	16.00	11	16.50	British	Anglo-Chilean Nit. Co.	380.0	51.0	24.0	Autofagasta, Chile.	Savannah, Ga.	Nitrates	7,000	5,361	3,439
Spancer 1																			
Kellogg 1	11	6.00	11	8.21	11	19.30	11	19.30	American	Kallogg S. S. Co.	391.8	51.3	25.0	Manila, P. I.	New York, N. Y.	Coconut oil	6,661	5,601	3,913
King City 1	11	9.15	11	10.14	11	21.20	11	22.00	British	Louis Dreyfus & Co.	414.7	54.3	25.0	Vancouver, B. C.	Gibraltar	Wheat	7,980	6,993	5,397
Justin 1	11	16.30	11	17.17	12	1.50	12	1.50	German	North German Lloyd	449.1	58.2	25.3	Vancouver, B. C.	Bremen, Germany	Wheat, general	7,606	7,933	5,799
Guatemala 1	11	9.00	12	6.20	12	15.20	13	9.10	American	Panama Mail S. S. Co.	360.2	51.6	23.0	San Francisco, Cal.	New York, N. Y.	General	2,604	5,776	4,081
Roman Star 1	11	13.30	12	6.45	12	16.00	13	9.55	British	Blue Star Line	420.0	54.0	23.0	Vancouver, B. C.	Rotterdam, Holl'd	Frozen, general	4,130	7,439	5,843
Labrador 1 10	11	19.50	12	7.03	12	19.45	12	19.45	Belgian	Soc. Anonyme D'Arm't.	440.8	57.4	27.0	Los Angeles, Calif.	Antwerp, Belgium	Gas oil	9,200	7,615	4,976
Salvador 1	12	16.40	12	17.37	13	2.25	13	2.25	British	Pacific Steam Nav. Co.	475.0	63.5	19.5	Champernon, Guat.	Cristobal, C. Z.	Coconut, hides	366	1,270	735
Port Hope 10	12	22.00	13	6.14	13	15.35	13	15.35	British	Com'ith & Donk. Line.	417.2	63.3	26.0	London, England	London, England	Frozen, general	7,465	10,720	6,929
Swolder 1 10	12	22.00	13	6.58	13	16.20	13	16.20	Norwegian	Pet. Star & Fin. Corp	408.3	55.3	27.0	Los Angeles, Calif.	Boston, Mass.	Gasoline	8,480	6,466	4,336
American 1	13	4.00	13	7.41	13	17.20	13	18.15	American	Amer-Hawaiian Line	404.6	53.9	25.0	Seattle, Wash.	London, England	General	5,352	8,777	4,761
Trelway 1	13	8.20	13	8.22	13	18.30	13	19.40	British	Kerr, Gifford & Co.	397.4	54.7	24.0	Portland, Ore.	Cobb, Ireland	Wheat	7,600	6,395	4,512
Holystone 1	13	8.30	13	10.13	13	20.55	13	20.55	British	Dale & Co.	406.0	54.0	24.0	Vancouver, B. C.	London, England	General	8,132	5,843	4,268
Silverdell 1	13	12.40	13	13.41	13	20.35	14	21.05	British	S. & J. Thompson Line	397.4	52.0	18.0	Vancouver, B. C.	Bombay, India	General	2,050	6,087	4,681
Kinderlik 1	13	15.10	13	17.04	14	1.20	14	1.20	Dutch	Holland-American Line	469.4	58.4	24.0	Vancouver, B. C.	Rotterdam, Belgium	General	8,445	8,515	6,060
Tessa 1	13	19.25	14	6.35	14	14.15	14	17.10	Norwegian	Den-Sigurd Line	375.8	51.4	23.2	San Antonio, Chile.	Oslø, Norway	General	6,037	6,688	3,930
Havover 1	13	19.55	14	6.43	14	14.45	14	14.45	American	Amer-Sigurd Pacific	434.3	57.7	23.0	Manila, P. I.	New Orleans, La.	Sugar, co'ntoil	8,767	7,982	5,911
Erik Frisell 10	13	24.00	14	7.58	14	19.10	14	20.57	Swedish	Chilean Nitrate Ass'n	392.2	52.6	24.0	Antofagasta, Chile	Azores	Nitrates	7,140	5,766	4,084
Corvado 10	14	4.00	14	8.48	14	18.10	14	21.30	Norwegian	Grace Line	368.0	51.5	23.3	Tecoaqui, Chile	Savannah, Ga.	Nitrates	6,838	5,404	3,970
Cal 1	14	6.30	14	9.05	14	18.55	14	18.55	German	Roland Line	216.5	32.9	12.2	Guaymas, Mex'd'r	Cristobal, C. Z.	General	5,600	105	698
Seward 1	14	9.45	14	10.39	14	19.40	14	19.45	British	Danlson Line, Ltd.	411.4	55.7	26.0	Vancouver, B. C.	Glasgow, Scotland	Fresh fruit, grain	4,668	7,424	5,398
Kwango 1	14	12.40	14	13.33	14	20.50	14	20.50	Japanese	Osaka Shosen Kaisha	461.7	61.5	21.0	Shanghai, China	Baltimore, Md	General	3,743	9,407	6,777
San Diego 1	14	13.30	14	14.14	14	22.40	14	22.40	American	Willis S. S. Corp.	376.4	52.3	25.0	Seattle, Wash.	Baltimore, Md	General	6,369	3,455	3,879
Lebore 1	14	3.30	14	16.30	15	14.20	15	14.20	American	Ore S. S. Corp.	549.0	72.2	34.2	Oriz Grande, Chile	Baltimore, Md	Iron ore	21,000	14,925	4,635

1 For orders. 2 Nitrates, tin, and copper. 3 Gasoline and lubricating oil. 4 Coffee, cacao, and faguu. 5 Lumber, lead, and automobile parts. All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.

ARRIVALS.				DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
February 8	Kungsholm	Swedish-American Line.	New York via wayports.	February 8	Rugia	Hamburg-American Line.	Cartagena, Colombia.
February 8	Dorelian	Leyland S. S. Line.	Port Limon, Costa Rica.	February 8	No. 9685 ²⁶	Pan American Airways.	San Salvador and waypts
February 8	Duchess of Richmond	Canadian-Pacific R. R. Co.	Liverpool via wayports.	February 8	No. 670-M ²⁶	Pan American Airways.	Miami via wayports.
February 8	Pastores	United Fruit Co.	Port Limon, Costa Rica.	February 8	U. S. Navy.	U. S. Navy.	Beaumont, Tex.
February 8	Tetonia	Hamburg-American Line.	Hamburg via wayports.	February 8	Pastores	United Fruit Co.	New York via Habana.
February 9	Reliance	Swedish-American Line.	Barranquilla and waypts.	February 8	Parima	United Fruit Co.	New Orleans and waypts.
February 9	Cudimamarca C-33 ²⁶	Scadta Airplane Co.	New York via wayports.	February 8	Dorelian	Leyland S. S. Line.	Liverpool via wayports.
February 9	Statenland	Holland-Netherlands S. Co.	Amsterdam via wayports.	February 8	Samaria	Hamburg-American Line.	Port Limon, Costa Rica.
February 9	Simon Bolivar	Royal Netherlands S. Co.	Avonmouth via wayports.	February 9	Duchess of Richmond	Canadian-Pacific R. R. Co.	Port Limon, Costa Rica.
February 10	No. 945-M ²⁶	Pan American Airways	Talara via wayports.	February 9	Pearl Marie ²³	United Fruit Co.	Liverpool, Nicaragua.
February 10	Cayana	Elders & Fryffels, Ltd.	Avonmouth via wayports.	February 9	Kungsholm	Swedish-American Line.	Bluefields, Nicaragua.
February 11	Ulla	United Fruit Co.	New York via wayports.	February 9	Reliance	Hamburg-American Line.	New York via wayports.
February 11	Cristobal	Panama R. R. S. S. Line.	New York via Haiti.	February 10	Cayana	Elders & Fryffels, Ltd.	New York via wayports.
February 11	Staxola	United Fruit Co.	New York via Kingston.	February 11	Simon Bolivar	Royal Netherlands S. Co.	Avonmouth via wayports.
February 11	Tela	United Fruit Co.	New Orleans, La.	February 11	No. 9684 ²⁶	Pan American Airways	Port Limon, Costa Rica.
February 11	No. 668-M ²⁶	Pan American Airways	Miami via wayports.	February 11	No. 669-M ²⁶	Pan American Airways	San Salvador and waypts.
February 11	No. 9685 ²⁶	Pan American Airways	Tampa, Fla.	February 11	Statenland	Holland-America Line.	Miami via wayports.
February 12	Inapaquina ²⁷	A. Tagarapulos	San Salvador and waypts.	February 11	Tela	United Fruit Co.	New York via wayports.
February 12	Tela	United Fruit Co.	Colon, Rep. of Panama.	February 12	Inapaquina ²⁷	A. Tagarapulos	Colon, Rep. of Panama.
February 12	Vestvargen	Pan American Airways	Bocas, Rep. of Panama.	February 12	No. 945-M ²⁶	Pan American Airways	Talara via wayports.
February 12	Ulla	Aluminium Line.	New Orleans and waypts.	February 12	Skxola	United Fruit Co.	Cartagena via wayports.
February 12	Marjineque	Colombian S. S. Line.	Southampton via waypts.	February 12	Ulla	United Fruit Co.	Cartagena, Colombia.
February 13	Aradern Star	Blue Star Line.	Port Limon via waypts.	February 12	Convallaria	Aluminium Line.	Port Limon, Costa Rica.
February 13	Simon Bolivar	Royal Netherlands S. Co.	Port Limon, Costa Rica.	February 12	Cudimamarca C-33 ²⁶	Scadta Airplane Co.	Kingston, Jamaica.
February 13	No. 309-N ²⁶	Pan American Airways	Caracaco via wayports.	February 13	Mardiague	Colombian S. S. Line.	Baranquilla and waypts.
February 14	No. 670-M ²⁶	Pan American Airways	Miami via wayports.	February 13	Tela	United Fruit Co.	New York via wayports.
February 14	No. 9684 ²⁶	Pan American Airways	San Salvador and waypts.	February 14	Vestvargen	Aluminium Line.	New Orleans and waypts.
February 14	No. 945-M ²⁶	Pan American Airways	Talara via wayports.	February 14	Simon Bolivar	Royal Netherlands S. Co.	Amsterdam and waypts.
February 14	Cartago	United Fruit Co.	New Orleans and waypts.	February 14	Amapala	A. Tagarapulos.	New Orleans and waypts.
February 14	Annetta I. ²⁷	A. Tagarapulos.	Colon, Rep. of Panama.	February 14	Aradern Star	Blue Star Line.	Madeira and wayports.

²⁶ Air mail carrier. ²⁷ Motor boat. ²⁸ Motor schooner.

PORT OF BALBOA.

February 9	Real ³⁰	Hans Elliot.	Panama Bay, R. P.	February 9	Siprems ²⁹	Van Camp Seafood Co.	Panama Bay, R. P.
February 10	Shabonee ¹	Standard Oil Co., N. Y.	Los Angeles, Calif.	February 9	Real ³⁰	Standard Oil Co., N. Y.	Panama Bay, R. P.
February 10	City of Panama ²⁹	Buenaventura, Colombia.	Buenaventura, Colombia.	February 12	Shabonee ¹	Standard Oil Co., N. Y.	Los Angeles, Calif.
February 12	Rakuyo Maru	Hongkong, China.	Hongkong, China.	February 13	City of Panama ²⁹	Panama Mail S. S. Co.	Panama, Calif.
February 12	Hans Elliot	Nippon Yusen Kaisha.	Panama Bay, R. P.	February 13	Rakuyo Maru	Nippon Yusen Kaisha.	Valparaiso, Chile.
February 12	Hans Elliot	Hans Elliot.	Panama Bay, R. P.	February 13	Real ³⁰	Panama Bay, R. P.	Panama Bay, R. P.
February 12	Marconi ³⁰	Hans Elliot.	Panama Bay, R. P.	February 13	Marconi ³⁰	Hans Elliot.	Panama Bay, R. P.
February 12	Sambu ³⁰	Hans Elliot.	Panama Bay, R. P.	February 13	Sambu ³⁰	Hans Elliot.	Panama Bay, R. P.

²⁹ Motor ship. ³⁰ Motor schooner. ³¹ Other than ships passing through the Canal.

Salt-water Draft of Vessels Transiting Canal in 1930.

During the calendar year 1930, the average salt-water draft of vessels making the 2,956 commercial transits of the Panama Canal from the Atlantic to the Pacific was 20.4 feet. From the Pacific to the Atlantic, the average draft of the 2,929 commercial vessels was 24.2 feet. The average draft of the total commercial transits during the year, 5,885, was 22.4 feet.

In the following tabulation is shown the salt-water draft of vessels through the Canal during 1930, separated in 1-foot intervals and segregated by direction of transit, with the averages for 1930, 1929, and 1928:

Draft.	Atlantic to Pacific.	Pacific to Atlantic.	Total.	Percentage of total.
Under 10 feet.....	48	32	80	1.36
10 to 11.....	23	18	41	.70
11 to 12.....	19	16	35	.59
12 to 13.....	37	27	64	1.09
13 to 14.....	45	36	81	1.38
14 to 15.....	50	56	106	1.80
15 to 16.....	87	34	121	2.06
16 to 17.....	114	38	152	2.58
17 to 18.....	181	36	217	3.69
18 to 19.....	292	40	332	5.64
19 to 20.....	304	56	360	6.12
20 to 21.....	342	63	405	6.88
21 to 22.....	294	86	380	6.46
22 to 23.....	244	129	373	6.34
23 to 24.....	247	242	489	8.31
24 to 25.....	199	363	562	9.55
25 to 26.....	143	399	542	9.21
26 to 27.....	125	419	544	9.24
27 to 28.....	81	342	423	7.19
28 to 29.....	38	214	252	4.28
29 to 30.....	20	124	144	2.45
30 to 31.....	15	65	80	1.36
31 to 32.....	6	26	32	.54
32 to 33.....	2	7	9	.15
33 to 34.....		12	12	.20
34 to 35.....		23	23	.47
35 to 36.....		21	21	.36
Total.....	2,956	2,929	5,885	100.00
Average, 1930.....	20.4	24.2	22.4	.....
Average, 1929.....	20.9	24.2	22.5	.....
Average, 1928.....	20.3	24.3	22.2	.....

The transit of vessels of the greatest draft through the Canal in 1930 was that of the *Marore* in March, and of the *Chilore* in June, each drawing 36 feet, carrying iron ore from Chile to the United States. From the Atlantic to the Pacific, the transit of the vessel with the greatest draft was that of the *Virginia*, in February, drawing 32 feet.

It will be noted that the average draft of vessels transiting the Canal from the Pacific to the Atlantic is greater than of vessels passing through in the opposite direction. This is accounted for by the fact that the Pacific-to-Atlantic traffic is made up to a great extent of vessels carrying capacity cargoes, such as mineral oils, iron ore, wheat, nitrates, and other bulk products, while the Atlantic-to-Pacific traffic is composed largely of vessels carrying miscellaneous manufactured goods which either are essentially not so heavy or else do not permit the fullest use of stowage space of the vessels, and by far the greater proportion of the transits in ballast are included in the Atlantic-to-Pacific traffic.

United States Intercoastal Traffic by Commodities for January, 1931.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for January, 1931, and the totals for January, 1930 and 1929. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Agricultural implements.....	971		971
Alfalfa.....		595	595
Alfalfa meal.....		619	619
Ammonia.....		15	15
Asbestos.....	139		139
Asphalt.....	135	94	229
Automobiles.....	1,744	79	1,823
Automobile accessories.....	230	38	268
Bamboo.....		26	26
Bark.....		280	280
Beans.....	15	9,614	9,629
Bones and bonemeal.....		18	18
Borax.....	20	685	705
Bran.....		95	95
Burlap.....	88	115	203
Calcium carbide.....	110		110
Camphor.....		6	6
Canned:			
Fish.....	132	5,474	5,606
Fruit.....	845	18,245	19,090
Meat.....	20		20
Milk.....		25	25
Soup.....	1,790		1,790
Vegetables.....	475	3,188	3,663
Miscellaneous and unclassified.....	2,400	9,890	12,290
Carbon black.....	32	30	62
Celite filtered.....		800	800
Cement.....	210		210
Charcoal.....	145	45	190
Chemicals.....	1,454	640	2,094
China and fire clay.....	45	50	95
Coal.....	4,428	4	4,432
Cocoa.....	116	89	205
Coconuts.....	19	267	286
Coffee.....	306	108	414
Coke.....	1,188		1,188
Cold storage:			
Butter.....		20	20
Eggs.....	11		11
Fish.....	74	73	147
Meat.....		25	25
Other.....	451		451
Confectionery.....	495		495
Copra.....		25	25
Cork.....	22		22
Cotton.....	168	3,179	3,347
Cottonseed meal.....		200	200
Cyanide.....	40	91	131
Drugs and medicines.....	1,294	287	1,581
Dyewoods.....		50	50
Earthenware.....	78	16	94
Eggs, dried.....		12	12
Explosives.....	96	107	203
Fertilizer.....	515	234	749
Flour.....	188	4,651	4,839
Fruit:			
Dried.....		10,005	10,005
Fresh.....		464	464
Fullers earth.....	73		73
Furniture.....	287	14	301
General.....	24,777	19,571	44,348
Glass and glassware.....	1,739	828	2,567
Glue.....		93	93
Guano.....		40	40
Gum.....		46	46

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Hair	15	49	64
Hardwoods	1,180	66	1,246
Hay		632	632
Hemp	8	463	471
Honey		10	10
Hops		204	204
Infusorial earth		131	131
Jute	14	328	342
Kapok		35	35
Lard substitute	1,425		1,425
Leather	50		50
Linoleum	543	75	618
Liquors	15		15
Lumber	897	188,609	189,506
Malt	84		84
Manufactured goods:			
Iron and steel	60,492	587	61,079
Machinery	2,116	433	2,549
Railroad material	404		404
Tinplate	5,950		5,950
Textiles	2,746	59	2,805
Miscellaneous	6,551	1,898	8,449
Marble	22		22
Matches	246	100	346
Metals:			
Antimony		208	208
Copper		5,504	5,504
Iron	709		709
Lead		357	357
Scrap	335	134	469
Tin	140	100	240
Zinc	57	1,401	1,458
Other	67		67
Milk, powdered	122	520	642
Molasses	74		74
Musical instruments	11		11
Nitrates	1,347		1,347
Nuts	22	268	290
Oats	300		300
Oils:			
Coconut		850	850
Cottonseed	215		215
Crude	8,306		8,306
Gas oil, fuel oil		43,877	43,877
Gasoline, benzine, naphtha	83	166,429	166,512
Lubricating and greases	6,125	13	6,138
Vegetable	62	5	67
Wood	25	40	65
Other	37	808	845
Ores:			
Magnesite		23	23
Manganese	30		30
Paint	617	104	721
Paper	4,897	4,094	8,991
Paper pulp	31	6,887	6,918
Paper roofing	59		59
Peanuts	444	393	837
Phosphates	1,244		1,244
Porcelain	192	453	645
Quicksilver	7		7
Rags		113	113
Rice	154	70	224
Rope	318	110	428
Rosin	730		730
Rubber:			
Manufactured	459	131	590
Raw	222	3	225
Scrap		65	65
Salt	175		175
Sand	550		550
Seeds:			
Grass		79	79
Other	40	355	395
Shells	891		891
Silk		921	921
Skins and hides	20	2,137	2,157
Slate	283		283
Soap	1,227	3	1,230
Soda	472		472
Soda ash	511		511
Soda, bicarbonate	101		101
Soda, caustic	139		139
Starch	69		69
Sugar	43	2,793	2,836
Sulphur	15,316		15,316

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Syrup.....	63		63
Talc.....		56	56
Tallow.....		491	491
Tar.....	65		65
Tea.....	1	115	116
Tobacco.....	1,153	33	1,186
Toys.....	28		28
Vegetables.....		552	552
Waste.....	18	116	134
Wax.....	195	11	206
Wine.....		298	298
Wool.....	10	1,216	1,226
Zinc oxide.....	70		70
Total, January, 1931.....	178,997	526,987	705,984
Total, January, 1930.....	196,628	693,838	890,466
Total, January, 1929.....	257,198	644,018	901,216

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending February 14, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Saramacca.....	United Fruit Co.....	February 7...	February 8...		40
Esparta.....	United Fruit Co.....	February 9...	February 10...	109	
Ecuador.....	Panama Mail S. S. Co.....	February 10...	February 11...	104	5
Knute Nelson.....	Fred Olsen & Co.....	February 10...	February 12...	1,834	2
Shabonee.....	Standard Oil Co.....	February 10...	February 12...	6,285	
Annie Johnson.....	Johnson Line.....	February 11...	February 11...	219	
Guatemala.....	Panama Mail S. S. Co.....	February 11...	February 12...	56	1
Rakuyo Maru.....	Nippon Yusen Kaisha.....	February 12...	February 12...	86	
Salvador.....	Pacific Steam Navigation Co.....	February 12...	February 12...	1	
City of Panama.....	Panama Mail S. S. Co.....	February 12...	February 14...		158
Santa Teresa.....	Grace Line.....	February 14...	February 14...	142	

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 15 years of operation.

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OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., February 25, 1931. No. 30.

Comparison of Canal Traffic in January, 1931, with January Traffic in Previous Years.

Commercial traffic through the Canal during the month of January, 1931, was the lowest January traffic since 1927, when 443 such vessels passed through the waterway. In comparison with January, 1930, the traffic for the past month declined 55 transits (10.4 per cent); 220,757 net tons, Panama Canal measurement (8.5 per cent); and 504,695 cargo tons (19.3 per cent). In comparison with January, 1929 (which was the largest month's traffic to date in Canal traffic), there was a decrease of 127 transits (21.1 per cent); 390,409 net tons, Panama Canal measurement (14.1 per cent); and 751,898 cargo tons (26.3 per cent).

In the tabulation below are shown the number of transits, net tonnage, Panama Canal measurement, and the tons of cargo carried through the Canal during the month of January each year from 1915 to 1931, inclusive, and for comparison, the monthly averages for the corresponding fiscal year ending on June 30 following:

Calendar year.	Month of January.			Fiscal year.	Average per month for fiscal year.		
	Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.		Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.
1915.....	96	337,249	426,482	1915.....	102	361,197	465,567
1916.....	2	600	1,008	1916.....	63	199,687	257,843
1917.....	170	539,613	640,177	1917.....	150	483,213	588,213
1918.....	153	495,127	553,507	1918.....	172	547,839	627,669
1919.....	170	499,815	530,816	1919.....	169	510,416	576,385
1920.....	238	765,533	894,628	1920.....	206	712,170	781,208
1921.....	279	1,094,323	1,177,053	1921.....	241	951,323	966,601
1922.....	210	846,516	807,298	1922.....	228	951,455	907,075
1923.....	352	1,610,692	1,591,932	1923.....	331	1,550,482	1,630,656
1924.....	476	2,400,040	2,427,332	1924.....	436	2,179,073	2,249,559
1925.....	401	1,960,015	1,907,469	1925.....	389	1,904,596	1,996,570
1926.....	479	2,300,187	2,346,643	1926.....	433	2,064,549	2,169,787
1927.....	443	2,121,631	2,241,765	1927.....	456	2,185,651	2,312,351
1928.....	540	2,422,770	2,372,061	1928.....	538	2,454,886	2,469,226
1929.....	603	2,771,280	2,858,835	1929.....	534	2,468,483	2,555,250
1930.....	531	2,601,628	2,611,632	1930.....	515	2,498,385	2,502,519
1931.....	476	2,380,871	2,106,937	1931.....	483	2,415,577	2,220,218

¹ Canal opened August 15, 1914.

² Average for 10½ months.

³ Average for 7 months of fiscal year.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., February 21, 1931.

No. 848.

Nicaragua, west coast, Corinto Harbor, light buoys moved. The following is quoted from Notice to Mariners No. 6, Washington, D. C., dated February 7, 1931:

The commanding officer of the U. S. S. *Sacramento* reports, under date of January 28, 1931, that the following changes have been made in the buoyage of Corinto Harbor:

(a) Light buoy No. 2 has been moved and reestablished 500 yards 320 degrees from Cardon Head Light.

(b) Light buoy No. 7 has been moved and reestablished 760 yards 117½ degrees from Cardon Head Light.

Approximate position of Cardon Head Light, latitude 12° 27' 54" N., longitude 87° 12' 30" W.

H. BURGESS,
Governor.

CANAL WORK IN JANUARY, 1931.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of January, 1931.

BALBOA HEIGHTS, C. Z., February 17, 1931.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of January, 1931:

NUMBER OF TRANSITS.

During the month, 476 commercial vessels and 3 small nonscagoing launches under 20 tons transited the Canal. In addition to these there were 69 vessels belonging to the United States Government, and 2 transits of a vessel solely for repairs, on which no tolls were collected, making a total of 550 transits for the month, or a daily average of 17.74.

Tolls on the commercial vessels amounted to \$2,108,140.42, and on the launches to \$16.77, a total of \$2,108,157.19, or a daily average on all traffic of \$68,005.07.

In comparison with the previous month, traffic for January declined 3.8 per cent in the number of transits, and 3.9 per cent in tolls collected. As compared with January, 1930, traffic for the past month decreased 10.4 per cent in number of transits and 10.7 per cent in tolls. In comparison with the first 7 months of the fiscal year 1930, the corresponding period this year shows a decrease of 355 transits and \$1,182,935.87 in tolls, 9.5 per cent and 7.3 per cent, respectively.

The quadrennial overhaul of the Gatun Locks was commenced on January 7th, and will require 90 to 100 days to complete. One side of the locks is to be overhauled at a time, leaving the other to take care of Canal traffic. During the overhaul the Canal is to be in operation 24 hours daily for the purpose of transiting such vessels as can not be accommodated during daylight hours.

The total number of craft of all kinds transiting the Canal during the month of January in the two preceding years and in 1931 are shown in the following tabulation:

	January, 1929.	January, 1930.	January, 1931.
Commercial vessels.....	603	531	476
Launches (under 20 tons).....	7	4	3
Noncommercial vessels:			
United States Government.....	119	52	69
Panamanian Government.....	2	2	.....
For repairs.....	4	7	2
Total.....	735	596	550

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun.....	10	8	18
Pedro Miguel.....	30	19	49
Miraflores.....	29	18	47
Total.....	69	45	114

COMMERCIAL TRAFFIC. ¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tons of cargo carried, and tolls collected, from the commercial traffic transiting the Canal each month from the beginning of the fiscal year 1931 to the end of January, 1931, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929-30	1930-1	1929-30.	1930-1.	1929-30.	1930-1.	1929-30.	1930-1.
July.....	527	488	2,468,280	2,438,895	2,598,162	2,402,047	\$2,259,582.37	\$2,180,511.82
August....	541	465	2,558,739	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
September..	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.58
October....	564	517	2,747,949	2,584,160	2,845,643	2,394,410	2,485,897.71	2,288,982.08
November..	525	479	2,498,906	2,371,487	2,534,631	2,263,200	2,244,895.94	2,098,357.36
December..	522	495	2,548,771	2,473,626	2,524,934	2,166,884	2,309,030.88	2,192,583.85
January...	531	476	2,601,628	2,380,871	2,611,632	2,106,937	2,360,211.24	2,108,140.42
Total.....	3,733	3,378	17,849,534	16,909,036	18,228,515	15,541,529	16,188,845.40	15,005,903.53

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these governments, and vessels transiting solely for repairs, do not pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for January in the years 1929, 1930, and 1931, and comparison with the monthly averages for the calendar year 1930:

	January, 1929.	January, 1930.	January, 1931.	Average per month for calendar year 1930.
Number of vessels.....	603	531	476	490
Panama Canal net tonnage.....	2,771,280	2,601,628	2,380,871	2,438,406
United States net tonnage.....	2,117,812	1,980,313	1,763,817	1,826,376
Registered gross tonnage.....	3,470,934	3,246,931	2,918,780	3,025,071
Registered net tonnage.....	2,122,121	1,981,575	1,771,209	1,839,006
Tolls.....	\$2,502,815.12	\$2,360,211.24	\$2,108,140.42	\$2,178,835.41
Tons of cargo carried.....	2,858,835	2,611,632	2,106,937	2,320,662

The average daily number of transits, tonnage (Panama Canal measurement), tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for calendar year 1930.
	January, 1929.	January, 1930.	January, 1931.	
Number of transits.....	19.45	17.13	15.35	16.12
Panama Canal net tonnage.....	89,396	83,923	76,802	80,167
Tolls.....	\$80,735.97	\$76,135.84	\$68,004.53	\$71,632.95
Tons of cargo carried.....	92,220	84,246	67,966	72,296

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of January in 1929, 1930, and 1931, are shown in the following tabulation:

	Average per vessel.		
	January, 1929.	January, 1930.	January, 1931.
Panama Canal net tonnage.....	4,596	4,899	5,002
United States net tonnage.....	3,512	3,729	3,705
Registered gross tonnage.....	5,756	6,115	6,132
Registered net tonnage.....	3,519	3,732	3,721
Tolls.....	\$4,150.61	\$4,444.84	\$4,428.87
Tons of cargo (including vessels in ballast).....	4,741	4,918	4,426
Tons of cargo (laden vessels only).....	5,834	5,791	5,307

NATIONALITY OF VESSELS.

Nineteen nationalities were represented in the commercial traffic through the Canal in January, 1931. Vessels of United States registry, with 197, led in the number of transits, while those flying the British flag, with 134, were second. Vessels of these two nationalities made up 69.5 per cent of the total transits for the month. Vessels of German and Norwegian registry were next with 32 and 30 transits, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo through the Canal during the month of January, 1931, was 2,106,937 tons. Cargo from the Atlantic to the Pacific aggregated 562,832 tons, compared with 551,712 tons in December, 1930, and 733,572 tons in January, 1930. From the Pacific to the Atlantic there were 1,544,105 tons, as compared with 1,615,172 tons in December, 1930, and 1,878,060 tons in January, 1930.

From the Atlantic to the Pacific various manufactured goods, totaling 164,308 tons, constituted the heaviest item of cargo, followed by mineral oils with 67,621 tons, cotton with 41,087 tons, sulphur with 27,779 tons, and slag with 24,701 tons. There was a decrease of 170,740 tons, or 23.3 per cent, in cargo moving in this direction as compared with January, 1930, owing to a general decline in shipments of the majority of the leading commodities normally routed in this direction.

From the Pacific to the Atlantic, mineral oils, as in previous months, constituted the leading commodity, totaling in January, 1931, 433,448 tons. This was followed by lumber, with 263,178 tons, nitrates with 159,468 tons, ores with 107,920 tons, and wheat with 93,620 tons. All these items declined in comparison with January, 1930, as follows: Mineral oils, 163,248 tons, or 27.4 per cent; lumber, 32,881 tons, or 11.1 per cent; nitrates, 14,942 tons, or 8.6 per cent; ores, 67,520 tons, or 38.5 per cent; and wheat, 48,214 tons, or 34.0 per cent. In aggregate, there was a decrease of 333,955 tons, or 17.8 per cent, in cargo moving in this direction.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton, nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.917 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.717 per net ton, Panama Canal measurement.

Taking traffic through the Canal for the month of January, 1931, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$9,089.18	\$8,256.40		\$832.78
British.....	624,381.34	658,715.00	\$34,333.66	
Chilean.....	17,445.00	19,366.00	1,921.00	
Colombian.....	1,533.40	1,301.00		232.40
Danish.....	29,760.67	33,700.60	3,939.93	
Danzig.....	25,898.43	23,110.40		2,788.03
Dutch.....	38,443.75	48,359.00	9,915.25	
French.....	63,877.29	67,254.20	3,376.91	
German.....	102,300.28	113,214.40	10,914.12	
Greek.....	3,400.00	4,292.00	892.00	
Italian.....	37,753.75	42,072.00	4,318.25	
Japanese.....	80,996.25	77,657.00		3,339.25
Norwegian.....	109,432.85	124,436.20	15,003.35	
Panamanian.....	4,323.15	6,077.00	1,753.85	
Peruvian.....	4,312.80	3,544.00		768.80
Spanish.....	2,585.00	3,052.00	467.00	
Swedish.....	30,368.26	30,220.80		147.46
United States.....	917,576.52	960,346.20	42,769.68	
Yugoslav.....	4,662.50	4,700.00	37.50	
Total.....	2,108,140.42	2,229,674.20	129,642.50	8,108.72
Net increase for all traffic.....			121,533.78	

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States interoceanic trade.....	\$30,601.01
United States foreign trade.....	14,134.82
United States—Canal Zone trade.....	* 1,966.15
Total.....	42,769.68

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in January, 1931, is shown in the following tabulation, segregated by nationality of vessels and direction of transit; laden vessels only are included.

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....		1.80	1.80
British.....	.62	1.24	.98
Chilean.....	.37	1.01	.67
Colombian.....	.97	1.24	1.09
Danish.....	.47	1.52	1.35
Danzig.....		1.83	1.83
Dutch.....	.45	1.13	.75
French.....	.41	1.38	.91
German.....	.68	1.36	1.05

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Greek.....		1.96	1.96
Italian.....	.21	.78	.60
Japanese.....	.74	1.07	.90
Norwegian.....	1.12	1.53	1.39
Panamanian.....	.80		.80
Peruvian.....	.92		.92
Spanish.....		1.91	1.91
Swedish.....	.61	2.80	2.01
United States.....	.66	1.40	1.07
Yugoslav.....		1.99	1.99
Averages, January, 1931.....	.65	1.35	1.05
Averages, January, 1930.....	.79	1.44	1.17
Averages, January, 1929.....	.88	1.52	1.27

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of January is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	6	34,324	\$35,485.15	44	237,568	\$247,121.60
Ballast.....	26	144,534	104,064.48	2	6,643	4,782.96
General cargo ships:						
Laden.....	163	828,400	738,905.05	184	902,587	815,662.80
Ballast.....	47	221,506	158,320.72	1	4,676	3,331.25
Noncargo-carrying ships:						
Yachts.....	2	75	64.65	1	558	401.76
Total.....	244	1,228,839	1,036,840.05	232	1,152,032	1,071,300.37
Method of propulsion:						
Steam.....	173	841,408	732,624.81	172	840,314	794,118.41
Motor.....	71	387,431	304,215.24	60	311,718	277,181.96
Total.....	244	1,228,839	1,036,840.05	232	1,152,032	1,071,300.37

Of the 345 steam-driven vessels, 231 were oil burning, 110 coal burning, and 4 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of January, 1931. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated.

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Cargo ships.....				1	3,434	\$4,292.50
Cruisers.....	2	18,900	\$9,450.00	1	8,900	4,450.00
Gunboats.....	2	3,150	1,575.00			
Mine sweepers.....	2	1,900	950.00	3	2,850	1,425.00
Patrol boats.....	2	1,000	500.00			
Submarines.....	10	8,628	4,314.00	26	16,636	8,318.00
Submarine tenders.....	1	1,496	1,122.00	1	2,360	2,950.00
Tankers.....	1	6,258	7,822.50			
Transports.....				1	3,992	4,990.00
Tugs.....	3	3,000	1,500.00	3	3,000	1,500.00
U. S. Army vessels:						
Mine planters.....	1	1,208	604.00			
Transports.....	1	11,724	14,655.00	4	15,159	18,948.75
Tugs.....	1	46	34.50	1	46	34.50
Total, U. S. Government.....	28		42,527.00	41		46,908.75
Vessels for repairs:						
Tankers.....	1	1,637	1,227.75	1	1,637	1,227.75
Grand total.....	29		43,754.75	42		48,136.50

* Indicates displacement tonnage.

* Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of January, 1931, carried cargo as follows: Atlantic to Pacific, 915 tons; Pacific to Atlantic, 3,940 tons; total, 4,855 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of January, 1931. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific	3	20	\$16.77
Pacific to Atlantic			
Total	3	20	16.77

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of January, 1931, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving	84,961	63,972	148,933
Local cargo shipped	5,649	942	6,591
Transit cargo arriving	2,099,336	2,072,488	4,171,824
Transit cargo clearing	2,098,960	2,087,583	4,186,543
Cargo received for transshipment	27,852	3,527	31,379
Cargo transhipped	27,120	3,090	30,210
"Canal Zone for Orders" cargo:			
Number of receipts issued	98	38	136
Number of releases issued	789	272	1,061
Tons received	1,066	370	1,436
Tons withdrawn	1,171	384	1,555
Packages received	4,354	2,756	7,110
Packages withdrawn	6,160	3,996	10,156
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company	53	3	56
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company	18,457	26	18,483
Coal issued, miscellaneous:			
Panama Canal departments	85	7	92
Panama Railroad Company	8		8
U. S. Army, including vessels	597	1	598
Individuals and companies	95		95
Transferred to Navy	34		34
Total sales and issues	19,276	34	19,310
Coal on hand, January 1, 1931	39,326		39,326
Coal on hand, February 1, 1931	30,045		30,045
Coal received during month	9,995		9,995
Coal received from Navy		34	34
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments	8,968.77	15,275.84	24,244.61
Panama Railroad Company	1,211.24	474.74	1,685.98
U. S. Army and Navy		125.60	125.60
Individuals and companies		406.26	406.26
Total sales and issues	10,180.01	16,282.44	26,462.45
Fuel oil received during January, 1931		67,876.07	67,876.07
Fuel oil on hand, February 1, 1931	18,814.89	80,746.29	99,561.18
Diesel oil borrowed from Union Oil Co.	184.02		184.02
Diesel oil issued and sold during January, 1931	184.02	2,543.82	2,727.84
Diesel oil on hand, February 1, 1931	1,083.28	39,331.50	40,414.78
Miscellaneous transfers	441.75	419.73	861.48
Gasoline and kerosene pumped for The Panama Canal	10,321.78	27,470.41	37,792.19
Gasoline pumped for individuals and companies	656.36	24,780.74	25,437.10
Oil pumped for individuals and companies:			
Receipts	341,403.08	234,836.53	576,239.61
Issues	268,618.70	157,820.55	426,439.25
Oil pumped for U. S. Navy	3,815.77	9,246.10	13,061.87
Total fuel oil, gasoline, and kerosene handled	635,621.47	541,276.39	1,176,897.86

	Cristobal.	Balboa.	Total.
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	14	2	16
Measured for Panama Canal net tonnage.....	3		3
Remeasured for Panama Canal net tonnage.....	14	4	18
Panama Canal net tonnage corrected.....	3	2	5
U. S. equivalent tonnage corrected.....	12	11	23
Services of harbor equipment:			
Tugs, total operating hours.....	410½	216	626½
Launches, total operating hours.....	1,411	1,537	2,948
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$13,711.23	\$7,382.50	\$21,093.75
Pilotage.....	19,612.00	7,814.00	27,426.00
Seamen.....	11,324.00	10,928.00	22,252.00
Launch service.....	2,004.50	2,492.00	4,496.50
Wharfage.....	16,303.57	6,775.48	23,079.05
Ships measured.....	100.00		100.00
Miscellaneous.....	514.81	126.50	641.31
Ships repaired at Panama Canal shops:			
Commercial.....	44	13	57
U. S. Army and Navy.....	7	10	17
Panama Canal equipment.....	6	14	20
Total.....	57	37	94
Vessels dry-docked:			
Commercial.....	6	11	17
U. S. Army and Navy.....	1	2	3
Panama Canal equipment.....	1	3	4
Total.....	8	16	24
Clearances issued.....	294	250	544
Bills of health issued.....	311	252	563

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal.....	569	3,507,376	2,134,094	535	3,085,654	1,886,085
Vessels entering port but not transiting Canal.....	73	474,524	279,723	12	38,634	26,816
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	125	762,559	454,553	111	707,921	423,075
<i>Ships clearing.</i>						
All vessels, including those transiting Canal.....	569	3,486,424	2,112,970	531	3,087,980	1,883,710
Vessels clearing port but not transiting Canal.....	77	488,912	288,123	12	42,403	29,159
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	128	772,367	460,627	112	706,328	422,002

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	1,129	762	1,891	132	415	547
From Pacific ports.....	176	114	290	190	178	368
Total disembarking.....	1,305	876	2,181	322	593	915
Embarking:						
For Atlantic ports.....	879	553	1,432	69	435	504
For Pacific ports.....	154	138	292	341	162	503
Total embarking.....	1,033	691	1,724	410	597	1,007
Remaining on board:						
From Atlantic to Pacific ports.....	1,609	2,069	3,678	1,704	1,768	3,472
From Pacific to Atlantic ports.....	923	1,347	2,270	1,109	1,456	2,565
From Atlantic to Atlantic ports.....	2,503	101	2,604			
From Pacific to Pacific ports.....				5	89	94
Total remaining on board.....	5,035	3,517	8,552	2,818	3,313	6,131
Total arriving.....	6,340	4,393	10,733	3,140	3,906	7,046
Total departing.....	6,068	4,208	10,276	3,228	3,910	7,138

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	244	58	23.8
Pacific to Atlantic.....	232	60	25.9
Total.....	476	118	24.8

In addition to the aforesaid, 59 passenger-carrying vessels called at the port of Cristobal and 1 at Balboa without transiting the Canal, making a total of 178 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of January, 1931, 43 commercial airplanes entered and 42 cleared at the port of Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of January, 1931, together with the total sales in the corresponding month in 1930 and 1929:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels.....	\$1,723.29	\$8,167.02	\$16,320.47	\$121.76	\$4,341.78	\$30,674.32
Government vessels.....	181.50	1,338.01	11,496.61	31.32	1,496.46	14,543.90
P. R. R. vessels.....	6.00	276.73	188.10	1,046.30	44.83	1,561.96
Total sales, January, 1931....	1,910.79	9,781.76	28,005.18	1,199.38	5,883.07	46,780.18
Total sales, January, 1930....	1,951.67	15,015.01	38,500.57	1,189.03	7,607.51	64,263.79
Total sales, January, 1929....	3,345.72	16,521.80	57,792.25	1,238.52	10,169.47	89,067.76
Sales at Balboa to:						
Commercial vessels.....	660.58	3,233.99	14,279.26	332.01	7,788.16	26,294.00
Government vessels.....	301.75	1,414.43	8,733.17	595.41	1,240.80	12,285.56
P. R. R. vessels.....	2.25	82.50	21.28	.....	12.65	118.68
Total sales, January, 1931....	964.58	4,730.92	23,033.61	927.42	9,041.61	38,698.24
Total sales, January, 1930....	1,439.83	13,216.09	32,956.06	658.74	5,623.58	53,894.30
Total sales, January, 1929....	4,764.16	17,536.75	50,982.39	590.75	20,233.75	94,107.80

The aggregate sales to Government vessels during the month was \$26,829.46; to Panama Railroad vessels, \$1,680.64; and to other commercial vessels, \$56,968.32, making the total sales to all vessels, \$85,478.42. The figures are subject to minor change on final audit.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of January, 1931, as compared with the corresponding month in 1930 and 1929:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. ¹			Jan., 1929.	Jan., 1930.	Jan., 1931.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	223	223	446	20	13	33	610	534	479
Pedro Miguel.....	227	233	460	24	20	44	614	558	504
Miraflores.....	227	232	459	25	17	42	563	551	501
Number of vessels put through locks.									
Gatun.....	234	244	478	56	42	98	760	614	576
Pedro Miguel.....	233	244	477	80	60	140	815	641	617
Miraflores.....	233	244	477	78	59	137	805	642	614

¹ Includes toll-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	75	88	87
Panama Canal equipment.....	18	49	47
Launches (under 20 tons).....	3	2	2
Vessels for repairs.....	2	1	1

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in January, 1931, as compared with the preceding month and the corresponding month in 1930:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	1,868,160,000	1,098,770,000	1,158,420,000
Maintenance.....	28,570,000		
Leakage.....	40,000,000	20,000,000	20,000,000
Total, January, 1931.....	1,936,730,000	1,118,770,000	1,178,420,000
Total, December, 1930.....	2,165,030,000	1,696,650,000	1,544,550,000
Total, January, 1930.....	1,416,100,000	1,193,330,000	1,207,650,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of January, 1931, are shown in comparative form in the following tabulation:

	January.		January—Years of record.		
	1930.	1931.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Discharge of Chagres River at Alhajuela.....	1,080	920	5,050	682	1,906
Maximum momentary discharge for the month.....	1,888	1,363	50,200		
Gatun Lake watershed, total yield.....	1,854	1,455	9,298	1,455	2,948
Gatun Lake watershed, net yield.....	1,106	616	8,641	616	2,138
Draft on Gatun Lake for lockages and power.....	1,993	2,348	3,275	987	2,166

¹ January 29, 1909.

² 1914 not included.

The monthly mean discharge of the Chagres River at Alhajuela for January, 1931, was 920 c. f. s., which is 52 per cent below the 30-year average of 1,906 c. f. s. The maximum monthly mean discharge on record of January is 5,050 c. f. s. in 1910, and the minimum is 682 c. f. s. in 1906. There were no rises of 5 feet or more during the month. The maximum momentary discharge for the month was 1,363 c. f. s. at elevation 92.64 feet on the 3d, and the minimum was 666 c. f. s. at elevation 91.97 feet on the 29th and 30th. The maximum momentary discharge on record for January is 50,200 c. f. s. at elevation 106.55 feet on January 29, 1909, and the minimum is 560 c. f. s. at elevation 91.60 feet on January 31, 1912.

Gatun Lake varied in elevation during January from a maximum of 86.78 feet on the 1st and 2d to a minimum of 85.67 feet on the 31st. The net decrease in the elevation of the lake during the month was 1.05 feet. The total yield of Gatun Lake watershed was 1,455 c. f. s., which is 51 per cent below the 18-year January average and is the minimum yield for the period of record. The maximum total yield for January is 9,298 c. f. s. in 1922. The net yield (total yield minus evaporation) amounted to 616 c. f. s., or 1,649 million cubic feet, which is equivalent to 0.36 foot on Gatun Lake. This is the lowest net yield for January on record.

Miraflores Lake varied between elevations 54.10 feet on the 16th to 53.20 feet on the 9th, 10th, 30th, and 31st. The mean elevation for the month was 53.63 feet and at midnight on the 31st it was 53.34 feet.

SEISMOLOGY.

Nine seismic disturbances were recorded during the month—on the 2d, 11th, 14th, 16th, 17th, and 28th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 4,485,900 kilowatt hours, and the computed water consumption was 3,294,817,734 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 1,399,100 kilowatt hours,

and the fuel oil consumption was 2,719.55 barrels. Dry season water conservation was started on January 10th, since which date one engine load of approximately 2,600 kilowatts has been carried at this station, with a water conservation of approximately 500 c. f. s.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 47 vessels during the month. There were 386 work orders issued during the month, as compared with 401 issued during the previous month.

MECHANICAL DIVISION.

During the month of January, 1931, miscellaneous repairs were made on 57 vessels at Cristobal and 37 at Balboa. Eight vessels were dry-docked at Cristobal and 16 at Balboa. Vessels of the Peruvian Navy, including the cruisers *Coronel Bolognesi* and *Almirante Grau*, and 4 submarines, were at Balboa for annual inspection and repairs. The annual overhaul on the United States Navy's submarine *S-17* was completed during January.

MUNICIPAL ENGINEERING DIVISION.

On the Thatcher Highway under construction from the west bank of the Canal opposite Balboa to the Zone boundary line near Arraijan, 24,900 cubic yards of earth were excavated, and 22 corrugated iron culverts were installed. Headwalls were constructed for 13 culverts. On the Paraiso-Summit road, work was continued on the manufacture of reinforcing mats, preparatory to starting concreting in February. In connection with municipal improvements at the Naval Air Station at Coco Solo, 2,000 feet of temporary track were removed, 750 cubic yards of coral were excavated for permanent track location, ties were placed, and 2,850 feet of permanent track were ballasted.

Work on several improvement projects in the cities of Colon and Panama, and in the Canal Zone, was carried on.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 823,576,500 gallons.

DREDGING DIVISION.

The general movement along the waterfront of West Culebra slide continued throughout the month, with an average of five-tenths of a foot toward the Canal, between stations 1770-00 and 1794-00 W., and four-tenths of a foot southward between stations 1774-00 and 1776-00 W. The reference points on this slide showed no movement. There were no other slides or any new bank breaks in the Cut during the month. There was no interference with shipping on account of slides during the month.

A suction dredge worked the entire month in the Folks River borrow pit, excavating a total of 122,300 cubic yards of sand, coral, and clay. The total material removed from the borrow pit to date is 351,800 cubic yards, of which 250,000 cubic yards remained in place, giving a run-off of 28.9 per cent. The area of completed fill is 11 acres.

The total excavation during January, 1931, was 1,114,971 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
	<i>Cubic yds.</i>	<i>Cubic yds.</i>	<i>Cubic yds.</i>
Work excavation:			
Canal prism, Gatun Lake—			
Project No. 3	55,150	13,800	68,950
Canal prism, Gaillard Cut—			
Project No. 3	6,450	57,800	64,250
Maintenance	3,100	12,300	15,400
Canal prism, Pacific entrance—			
Project No. 1		9,550	9,550
Maintenance	486,000	1,700	487,700
Balboa inner harbor—			
Project No. 1, extension No. 1	23,000	47,750	70,750
Maintenance	271,850		271,850
Plant excavation:			
Colon fill	122,300		122,300
Dredging sand at Chame	4,221		4,221
Total	972,071	142,900	1,114,971

The ferry operating at the north end of Pedro Miguel locks functioned 31 days during the month. One thousand four hundred and twelve single trips were made, and 566 Panama Canal, 1,145 U. S. Army, and 5,902 other vehicles, a total of 7,613, were ferried across the Canal.

MADDEN DAM PROJECT.

The consulting board, consisting of four members, completed their studies here and returned to the United States on January 3. Their preliminary report recommending a straight concrete gravity dam was submitted to this office before their departure.

The designing engineer, accompanied by three assistants, left at the end of the month for detached duty in Denver, Colo., in connection with the design and specifications of the main dam and power station, and saddle dams. Studies for flood regulation were made with numerous sketches. Studies of a concrete arch bridge over the spillway, spillway gates, and gantry crane for raising spillway gates, were continued. Tables and charts were prepared for final geological report. A series of drawings were in course of preparation to accompany specifications for bids on the project. The change of the southern boundary of the land on the left bank of the Chagres River which has been acquired by the United States was surveyed and monumented. With the abandonment of drill hole N-6, the exploratory drilling program was completed on January 12. To January 31, there has been completed a total of 28,303.6 linear feet of drilling. The field work of the geological investigations was completed in January, and final geological report was in course of preparation.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on January 31, 1931, was 24,047, composed of 8,134 Americans, 2,953 of whom were men, 2,451 women, and 2,730 children; 174 Europeans, 85 of whom were men, 31 women, and 58 children; and 15,739 West Indians, 4,327 of whom were men, 2,823 women, and 8,589 children. The total number of persons in quarters on January 31, 1930, was 22,316.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of January 21, 1931, with a comparison of the working force for the preceding month and for January, 1930:

	Total employees.		As of January 21, 1931.		
	January, 1930.	December, 1930.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	165	117	56	60	116
Electrical.....	397	354	168	250	418
Municipal Engineering.....	771	1,035	102	1,111	1,213
Lock Operation.....	944	1,054	369	1,637	2,006
Dredging.....	1,271	1,182	199	996	1,195
Madden Project.....	774	139	19	230	249
Mechanical.....	1,408	1,419	470	892	1,362
Marine.....	777	761	201	635	836
Fortifications.....	426	309	22	318	340
Total.....	6,933	6,370	1,606	6,129	7,735
Supply Department:					
Quartermaster.....	2,382	1,890	198	1,707	1,905
Commissary.....	1,547	1,574	232	1,321	1,553
Cattle Industry—Plantations.....	117	98	2	115	117
Hotel Tivoli.....	123	115	8	113	121
Hotel Washington.....	115	111	8	102	110
Transportation.....	317	345	79	245	324
Total.....	4,601	4,133	527	3,603	4,130
Accounting Department.....	213	206	197	6	203
Health Department.....	1,165	1,120	283	817	1,100
Executive Department.....	849	886	547	337	884
Total.....	2,227	2,212	1,027	1,160	2,187
Panama Railroad Company:					
Superintendent.....	348	301	47	270	317
Transportation.....	186	187	62	134	196
Receiving and Forwarding Agency.....	1,377	1,372	80	1,661	1,741
Coaling Stations.....	308	226	38	232	270
Total.....	2,219	2,086	227	2,297	2,524
Grand total, January, 1930.....	15,980				
Grand total, December, 1930.....		14,801			
Grand total, January, 1931.....			3,387	13,189	16,576

Additions to the gold force on the Isthmus in January were as follows: Employed in the United States, 15; reemployed in the United States, 7; employed on the Isthmus, 18; reemployed on the Isthmus, 19; total, 59. Separations from the gold force totaled 23, as follows: Resigned, 9; discharged, 8; retired, 3; died, 3. At the end of the month there were on file 750 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 199 deaths occurred during the month of January, 1931, among the population of the Canal Zone, and the cities of Panama and Colon (population 143,636), which is equivalent to an annual death rate of 16.63 per 1,000 population. The leading causes of death were: Pneumonia (broncho and lobar), 29; tuberculosis (various organs), 28; nephritis (acute and chronic), 14; syphilis, 10; and organic diseases of the heart, 10. There were 8 deaths from apoplexy, 8 from diarrhea and enteritis, 2 from dysentery, and 1 from whooping cough. There were 23 deaths among nonresidents, which are not included in the above statistics.

There were 320 live births and 22 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 28.57. Deaths among children under 1 year of age numbered 40, giving an infant mortality rate, based on the number of live births reported, of 125.00

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during the month was 188, of whom 31 were employees (6 white and 25 colored), 29 were members of employees' families (4 white and 25 colored), 20 were Canal Zone agriculturists, 50 were other civilian nonemployees, and 58 were Army and Navy personnel. Of the 60 employees and members of employees' families, 42 were probably infected outside our sanitized areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There was 1 death from malaria among residents, a colored Canal Zone agriculturist.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$491,482.30, of which \$467,916.20 was for the Department of Operation and Maintenance, and \$23,566.10 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material amounted to \$46,481.87.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of December, 1930, as compared with December, 1929, with the figures for the first six months of the current fiscal year as compared with the same period in the fiscal year 1930.

It is impossible to submit figures for the month of January at the time of writing this report, since all charges, etc., involved in the accounting have not been completed.

	December, 1929.	December, 1930.	To the end of December.	
			Last year.	This year.
Tolls.....	\$2,309,074.83	\$2,192,625.70	\$13,828,550.86	\$12,896,890.05
Other receipts.....	439,040.73	391,294.22	2,208,442.32	2,028,300.12
Total transit revenues.....	2,748,115.56	2,583,919.92	16,036,993.18	14,925,190.17
Total transit expenses.....	1,108,341.76	1,175,570.05	6,615,147.09	6,787,946.84
Net transit revenues.....	1,639,773.80	1,408,349.87	9,421,846.09	8,137,243.33
Three per cent capital charge.....	623,944.72	626,657.17	3,722,539.33	3,756,337.15
Transit surplus.....	1,015,829.08	781,692.70	5,699,306.76	4,380,906.18
Business revenues.....	1,469,915.18	1,351,189.57	9,489,904.29	9,022,720.42
Business expenses.....	1,386,445.40	1,292,796.56	8,955,039.69	8,603,316.82
Net business revenues.....	83,469.78	58,393.01	534,864.60	419,403.60
Three per cent capital charge.....	63,036.28	64,716.28	399,850.53	415,894.00
Business surplus.....	20,433.50	(6,323.27)	135,014.07	3,509.60
Combined revenues.....	4,218,030.74	3,935,109.49	25,526,897.47	23,947,910.59
Combined expenses.....	2,494,787.16	2,468,366.61	15,570,186.78	15,391,263.66
Net revenues.....	1,723,243.58	1,466,742.88	9,956,710.69	8,556,646.93
Three per cent capital charge.....	686,981.00	691,373.45	4,122,389.86	4,172,231.15
Combined surplus.....	1,036,262.58	775,369.43	5,834,320.83	4,384,415.78

() Indicates deficit.

Respectfully,

H. BURGESS,
Governor.

Cargo Through the Canal During January, 1931.

On pages 440 and 441 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in January, 1931. This cargo, segregated according to direction as compared with January, 1930, and the differences, is shown in the following tabulation:

	January, 1930.	January, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific	733,572	562,832	-170,740
Pacific to Atlantic	1,878,060	1,544,105	-333,955
Total	2,611,632	2,106,937	-504,695

It will be noted from the above that the Atlantic to Pacific tonnage decreased 170,740 tons (23.3 per cent) as compared with January, 1930, and that from the Pacific to Atlantic decreased 333,955 tons (17.8 per cent), making a total decrease in cargo tonnage in both directions of 504,695 tons (19.3 per cent). As has been pointed out in the past several months the decline in the Pacific-bound tonnage has been occasioned by a general curtailment in the shipments of the majority of the leading commodities normally routed in this direction. For several months prior to January, 1931, the slump in the cargo tonnage movement from the Pacific to the Atlantic has been relatively much lower than that in the opposite direction owing, principally, to the heavy movement of several food products from the Pacific Northwest. While these items as a whole held their own, with the exception of wheat and canned goods, the heavy curtailment in the shipments of other important commodities, particularly mineral oils, was sufficient to account for the decline shown above.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-five and nine-tenths (65.9) per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 26.3 per cent in Europe. Tonnage from the United States decreased 96,836 tons (20.7 per cent) in comparison with January, 1930, while that from Europe declined 48,665 tons (24.7 per cent). In relation to the total cargo the amount coming from the United States in January, 1931, was slightly higher than in January, 1930, while that from Europe was slightly lower.

Destination.—Thirty-nine and six-tenths (39.6) per cent of the Pacific-bound cargo tonnage was destined to the United States; 22.2 per cent to Asia; 14.6 per cent to Australasia; and 13.8 per cent to South America. Tonnage to all these areas decreased as follows in comparison with January, 1930: To the United States, 42,127 tons (15.9 per cent); to Asia, 74,735 tons (37.4 per cent); to Australasia, 29,217 tons (26.3 per cent); and to South America, 24,052 tons (23.7 per cent). In relation to the total cargo the tonnage destined to the United States was higher last month than in January, 1930, while that going to Asia and Australasia was lower. The proportionate amount destined for South America was approximately the same as in January, 1930.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 53.2 per cent came from the United States; 24.9 per cent from South America; 9.5 per cent from Canada; 6.1 per cent from Australasia; and 5.2 per cent from

Asia. The amounts coming from Australasia and Asia showed relative as well as actual increases of 19,737 tons (26.3 per cent) and 4,551 tons (6.0 per cent), respectively, as compared with January, 1930. Cargo tonnage from the United States declined 247,010 (23.1 per cent) in comparison with January, 1930, also showing a decline in its proportion to the total cargo. Cargo from Canada also showed a decrease in comparison with January, 1930, in the amount of 57,703 tons (28.3 per cent), as did that from South America which registered a decline of 57,460 tons (13.0 per cent). Canada also contributed a smaller proportion of the total cargo in January, 1931, than in January, 1930, while that from South America was a little higher than in January, 1930.

Destination.—Segregated according to destination, 50.9 per cent of the cargo tonnage moving from the Pacific to the Atlantic went to the United States, and 42.6 per cent to Europe. Tonnage to the United States decreased 320,104 tons (28.9 per cent), in comparison with January, 1930, also showing a decline in its relation to the total cargo in this direction. Although showing a considerable increase in its relation to the total cargo over January, 1930, there was a decline of 32,050 tons (4.6 per cent) in cargo tonnage destined to Europe. The heavy decline in mineral oil shipments was a large contributing factor in the heavy decrease in tonnage destined to the United States.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify over 88 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 12 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for January, 1930, or January, 1931, are listed in the following tabulation, showing differences:

Commodity.	January, 1930.	January, 1931.	Difference.
	Long tons.	Long tons.	
Ammonia.....	15,966	8,212	-7,754
Asphalt.....	17,485	3,892	-13,593
Automobiles.....	12,049	8,034	-4,015
Cement.....	36,608	12,007	-24,601
Coal and coke.....	10,774	10,619	-155
Cotton.....	31,902	41,087	+9,185
Manufactured goods:			
Iron and steel.....	158,083	113,777	-44,306
Machinery.....	12,793	14,044	+1,251
Railroad material.....	10,530	5,255	-5,275
Tinplate.....	22,361	14,537	-7,824
Textiles.....	10,809	6,276	-4,533
Miscellaneous.....	10,303	10,419	+116
Metal scrap.....	21,971	1,886	-20,085
Oils, mineral.....	47,620	67,621	+20,001
Paper.....	24,145	16,419	-7,726
Phosphates.....	68,621	12,910	-55,711
Slag.....	2,470	24,701	+22,231
Sulphur.....	16,501	27,779	+11,278
Tobacco.....	11,530	8,368	-3,162

The above 19 commodity groups for January, 1931, comprise 72.8 per cent of the cargo moving from the Atlantic to the Pacific. Six of the items showed increases, and 13 decreases.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

From the cargo declarations submitted it was possible to classify over 98 per cent of the cargo moving from the Pacific to the Atlantic

during the month of January, 1931. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1930 are listed below:

Commodity.	January, 1930.	January, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	
Barley.....	8,554	14,924	+6,370
Beans.....	16,630	28,874	+12,244
Canned goods (fish, fruit, vegetables, etc.).....	80,014	57,841	-22,173
Coffee.....	13,623	16,511	+2,888
Copra.....	12,676	18,333	+5,657
Cold storage (food products) ¹	32,691	46,690	+13,999
Cotton.....	13,415	5,502	-7,913
Fruit, dried.....	14,907	31,553	+16,646
Fruit, fresh.....	17,123	32,470	+15,347
Lumber.....	296,059	263,178	-32,881
Metals, various.....	49,106	42,369	-6,737
Nitrates.....	174,410	159,468	-14,942
Oils, mineral.....	596,696	433,448	-163,248
Ores (principally iron).....	175,440	107,920	-67,520
Paper pulp.....	13,302	7,753	-5,549
Sugar.....	48,302	62,571	+14,269
Wheat.....	141,834	93,620	-48,214
Wool.....	16,092	13,950	-2,142

¹ Does not include fresh fruit.

The above 18 commodity groups for January, 1931, comprise 93 per cent of the cargo moving from the Pacific to the Atlantic. Eight of the items increased in comparison with January, 1930, and 10 decreased.

(Continued on next page.)

British Battleship "Nelson" at Balboa.

The battleship *Nelson*, of the Royal British Navy, in command of Admiral Sir Michael Hodges, arrived at Cristobal on the morning of February 23, 1931, and immediately transited the Canal to Balboa, to pay a formal call of about a week's duration to the United States Fleet now sojourning at Balboa following maneuvers in and beyond the Gulf of Panama. The *Nelson*, which is one of the latest and most modern units of the British Navy, is 702 feet long (overall), 106 feet beam, and of 36,640 tons displacement. With her sister ship *Rodney*, the *Nelson* is said to be second in size only to the *Hood*, which is of 44,799 tons displacement. The *Hood* has made one transit of the Canal—in 1924.

Tolls on the *Nelson* for the one way amounted to \$18,320 at the tariff rate of 50 cents per displacement ton for war vessels of this type, and with the exception of those on the *Hood*, are the greatest yet levied on a ship for transiting the Canal; charges on the *Hood* were \$22,399.50.

Coal.

Coal, bunker, Navy Standard, is supplied to steamships including warships of all nations, trimmed in bunkers at \$7.25 at Cristobal and \$10.25 at Balboa per ton of 2,240 pounds. Extra charges are made in accordance with a published tariff for special trimming at the request of the officers of the ship, for galley, lump or run-of-mine coal in sacks, and for delivery, when coal is furnished from lighters or launches away from the coaling piers.

Coal can be bunkered by bunkering machines at any rate up to 1,500 tons per hour, regulated by the amount of necessary trimming.

Coal for cargo is sold at prices quoted on application and on authorization of the Governor.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, January, 1931.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										EUROPE.										Grand total.	Per cent of total cargo.					
	UNITED STATES.					C.R.Z.*					WEST INDIES.					TOTAL, NORTH AMERICA.							EUROPE.				
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.	East coast of Cen- tral America.	Cristobal, C. Z.*	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe,†	Total, Europe.			East coast of South America.	Egypt.	Africa.		
NORTH AMERICA:																											
W. coast United States	456,044	12,656,58	237,526	997	796	8,853	22,257	535,883	92,054	11,221	1,794	16,658	34,466	3,332	444	3,046	164	88	313	256,492	5,581	419	821,385	53.2			
W. coast of Canada	15,522			101	15,623	230	3,032	34,969	72,182		105	4,429	1,110	2,395	1,992	4,173				33,720	120,106	1,153	32	146,280	9.5		
W. coast Cen. America	872			872			44					72	979	60						1,056	2,167	173		11,404	0.8		
Bahob, C. Z.							180																	180			
Hawaiian Islands	3,242			32	3,274			3,274	1,206							254					1,460			4,734	0.3		
Total, North America.	475,630	12,659,58	420,546	756	5,834	9,167	17,411	25,333	596,380	165,442	11,221	1,899	21,159	36,555	5,787	7,436	164	123	889	380,225	6,907	451	983,963	63.8			
SOUTH AMERICA:																											
Chile	108,923	27,956	15,342	152,221			360	850	153,431	8,949	1,977	9	4,629	1,584	4,953	1,957	18			98,880	125,198	6		278,635	18.1		
Colombia	2,866			2,866			2,351		5,217															5,217	0.3		
Ecuador	9,434			9,434			2,158	8	11,600			126	144	83							353	23		11,976	0.8		
Peru	1,740			1,740	31,300		59	33,099	8,013	422	101	48	657	161		10,000	997	30	401	50,800				83,899	5.4		
W. coast S. America†	3,305			3,305			554		3,859	6				424						445	875			4,734	0.3		
Total, S. America.	126,268	27,956	15,342	169,560	31,300		5,482	853	207,206	16,968	2,399	110	4,803	2,809	5,114	2,040	12	242	1,015	129,726	177,226	29		384,461	24.9		
AUSTRALASIA:																											
Australia	1,445			1,445	3,553			4,998	1,623				90							3,081	4,794			9,792	0.6		
New Zealand	3,300			3,300				3,300	30	2,250		4,767									62,529			62,529	4.0		
Australasia †	4,745			4,745	3,553			8,298	64,182	2,250		4,857								15,119	86,408			22,385	1.5		
Total, Australasia	4,745			4,745	3,553			8,298	64,182	2,250		4,857								15,119	86,408			94,706	6.1		
ASIA:																											
Philippine Islands	38,609			14,553	53,162			53,162																53,162	3.4		
China	2,278			48	2,326		469	2,795																2,795	0.2		
Japan	9,007			9,007			762	9,992																9,992	0.6		
Far East †	1,601			1,601				1,601					6,325							7,100	13,425			15,026	1.0		
Total, Asia	51,585			14,601	66,186		602	762	67,550				6,325							7,100	13,425			80,975	5.2		
Grand total.	638,278	40,612	83,363	787,553	40,787	946	23,465	26,958	879,434	246,592	15,870	2,009	30,819	45,689	10,901	9,476	19,715	1,179	275,034	657,284	6,936	451	1,544,105	100.0			
Per cent of total cargo:																											
January, 1931	42.6	2.6	5.7	50.9	2.7	0.1	1.5	1.7	56.9	16.0	1.0	0.1	2.0	3.0	0.7	0.6	1.3	0.1	17.8	42.6	0.5	0.5	100.0				
January, 1930	52.8	1.6	4.6	59.0	1.2	0.1	0.9	1.8	62.9	14.9	1.1	0.1	1.4	3.0	0.4	0.4	0.5	0.1	14.8	36.7	0.4	0.4	100.0				
January, 1929	41.8	1.6	4.8	48.2	0.7	0.1	1.6	1.6	52.2	13.9	1.2	0.4	1.8	4.4	3.7	1.0	0.3	1.7	13.9	47.3	0.1	0.4	100.0				

* General cargo not routed so as to allow segregation between definite ports. † Includes both local and transit cargo.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, February 21, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Normanstar.	14	18	40	15	1	30	15	10	11	15	415.6	56.0	18.8	Newcastle, Eng.	Vancouver, B. C.	Ballast.	7,517	5,458	
Tayama Maru.	14	23	55	15	2	55	15	12	38	13	420.0	57.4	18.6	Baltimore, Md.	Shanghai, China.	General.	1,575	7,623	5,412
Jane	15	2	30	15	5	05	15	13	18	15	409.0	57.0	19.2	Baltimore, Md.	Seattle, Wash.	General.	3,702	6,615	4,966
Mathew	15	2	30	15	5	05	15	13	18	15	409.0	57.0	19.2	Baltimore, Md.	Seattle, Wash.	General.	3,702	6,615	4,966
Luckenbach.	15	15	15	6	30	15	14	00	15	19	434.3	57.7	19.6	Houston, Tex.	Tacoma, Wash.	General.	6,085	7,977	5,764
Nevadan.	15	2	15	7	20	15	15	05	15	16	460.0	58.0	19.0	Boston, Mass.	Portland, Oreg.	General.	2,816	6,829	4,627
Japan Arrow.	15	7	00	15	8	15	15	49	15	16	468.3	62.0	19.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	10,084	7,388	
El Cervo.	15	9	20	15	9	35	15	17	05	15	407.4	57.5	18.10	Philadelphia, Pa.	La Libertad, Ecua.	Ballast.	6,046	4,326	
Brandywine.	15	9	20	15	14	00	15	21	35	16	364.0	57.0	14.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast.	5,213	3,455	
Clewink.	15	7	35	15	7	35	15	15	02	15	180.0	33.0	14.0	New York, N. Y.	Balboa, C. Z.	Ballast.	5,213	3,455	
Comet.	15	15	55	15	18	35	15	10	29	16	480.0	68.0	19.4	New York, N. Y.	Los Angeles, Calif.	Ballast.	9,820	6,777	
Tsuyama Maru.	16	2	30	16	3	10	16	12	13	16	445.0	58.0	18.7	Boston, Mass.	Shanghai, China.	Cotton, tobacco.	3,740	7,956	5,681
Japanese	16	2	30	16	3	10	16	12	13	16	445.0	58.0	18.7	Boston, Mass.	Shanghai, China.	Cotton, tobacco.	3,740	7,956	5,681
Prince.	16	4	45	16	8	25	16	14	55	16	441.6	60.0	21.0	New York, N. Y.	Manila, P. I.	General.	2,808	9,240	6,145
Kenovis.	16	4	45	16	10	40	16	17	23	18	433.35	54.2	20.3	New York, N. Y.	San Francisco, Cal.	General.	1,913		
Loreto.	15	19	15	16	10	25	16	18	52	17	405.0	54.2	20.3	Hull, England.	Corral, Chile.	Military supplies.	4,127	7,334	5,037
Villager.	16	8	50	16	11	55	16	19	40	16	398.0	53.7	18.5	Buenos Aires, Arg.	Vancouver, B. C.	General.	3,959	6,869	5,131
Ammon.	16	00	40	16	12	30	16	20	10	16	393.0	53.0	19.3	Hamburg, Germany.	Valparaiso, Chile.	General.	1,609	7,334	5,221
Alvarado.	16	00	55	16	13	30	16	23	05	17	393.0	53.0	19.3	Hamburg, Germany.	Valparaiso, Chile.	General.	1,609	7,334	5,221
Bronny.	16	14	10	16	14	20	16	21	51	16	380.0	54.0	22.6	New York, N. Y.	Los Angeles, Calif.	General.	1,626	6,447	4,748
Locona.	11	20	55	17	2	20	17	12	15	17	380.0	49.0	22.6	London, England.	Talca, Peru.	Ballast.	6,346	6,447	4,748
Helio.	15	15	55	17	2	10	17	12	10	17	243.0	34.3	10.8	Cristobal, C. Z.	Ayulaja, Salvador.	Ballast.	1,158	722	
Somerset.	16	20	00	17	4	15	17	14	31	17	460.0	62.0	25.0	London, England.	N. Plymouth, N. Z.	General.	9,090	10,560	7,993
Henry S.	17	6	05	17	6	20	17	16	01	17	404.6	53.0	25.0	Baltimore, Md.	Tacoma, Wash.	General.	6,227	6,755	4,688
Grove.	17	6	05	17	6	20	17	16	01	17	404.6	53.0	25.0	Baltimore, Md.	Tacoma, Wash.	General.	6,227	6,755	4,688
Tabula.	17	9	50	17	10	17	16	49	17	17	468.0	62.0	17.0	Amsterdam, Holland.	Los Angeles, Calif.	Ballast.	9,558	6,210	
Quebec City.	17	9	50	17	10	17	16	49	17	17	468.0	62.0	17.0	Amsterdam, Holland.	Los Angeles, Calif.	Ballast.	9,558	6,210	
Baarn.	17	6	23	18	10	17	16	45	17	19	400.0	54.0	16.6	Cardiff, England.	Vancouver, B. C.	Ballast.	7,004	5,406	
Chile.	17	12	10	18	2	50	18	11	10	18	400.0	58.0	16.6	Rambouillet, Germany.	Corral, Chile.	General.	3,475	7,819	6,101
Kentuckian.	17	12	10	18	2	50	18	12	17	18	495.0	55.0	25.0	Newcastle, England.	Vancouver, B. C.	General.	2,474	7,382	5,603
Beaconlight.	17	18	45	18	4	30	18	13	21	18	414.5	52.7	20.0	Roseton, N. Y.	Seattle, Wash.	General.	2,663	7,049	4,991
Helio.	17	22	05	18	6	15	18	14	53	18	435.0	58.0	20.6	New York, N. Y.	Los Angeles, Calif.	Ballast.	7,482	5,153	
Antietam.	18	6	35	18	6	50	18	15	30	18	435.0	56.2	22.0	Perth Amboy, N. J.	Los Angeles, Calif.	Ballast.	7,426	5,073	
Katrina.	18	6	35	18	6	50	18	15	30	18	435.0	56.2	22.0	Perth Amboy, N. J.	Los Angeles, Calif.	Ballast.	7,426	5,073	
Luckenbach.	18	7	30	18	8	05	18	16	12	18	446.8	58.0	21.0	Boston, Mass.	Seattle, Wash.	General.	3,663	8,508	6,179
Shogun.	13	12	35	18	8	10	18	16	09	18	222.2	28.2	8.6	Key West, Fla.	San Diego, Calif.	Ballast.	400	576	
Salvador.	13	2	25	18	9	00	18	16	35	18	215.0	33.0	14.8	Cristobal, C. Z.	Champeron, Guat.	General.	400	1,270	735
San Gabriel.	18	6	00	18	9	05	18	17	15	18	386.8	52.2	17.3	Baltimore, Md.	Seattle, Wash.	General.	3,200	5,719	4,023

* Tanker. * Motor ship. * Mine sweeper. * Transport. * Yacht.

1 Lubricating oil, coal, and general.

(9)

San Angelmo	18	00.55	18	9.53	18	17.58	18	19.00	American	Quaker S. S. Co.	400.8	54.2	21.0	Portland, Oreg.	Coal, oil, general	3,451	6,755	4,887
Dulworth	18	9.40	18	10.45	18	19.07	18	20.23	American	Shell Oil Co.	495.0	59.0	20.0	Los Angeles, Calif.	Ballast	7,441	5,077	
Orbita	18	15.35	19	6.00	19	14.31	19	15.30	British	Pacific Steam Nav. Co.	330.0	67.4	27.9	Talcahuano, Chile	General	1,577	8,444	11,731
Romulus	19	6.35	19	7.30	19	15.11	19	19.38	Norwegian	Lochin American Line	347.4	50.0	20.0	Los Angeles, Calif.	Coke	4,195	5,125	3,741
Stockland	19	2.55	19	8.45	19	18.38	19	19.30	Swedish	Ore S. S. Corp.	591.0	72.2	20.8	Cruz Grande, Chile	Ballast	15,425	4,421	
Guldborg	19	12.43	19	14.30	19	21.49	19	23.00	Danish	Strange & Co.	385.0	54.2	15.6	Victoria, B. C.	Ballast	6,736	5,064	
Cauca	15	16.10	19	14.15	19	22.25	20	1.08	Colombian	National Navigation Co.	507.0	22.0	9.8	Buenaventura, Col.	General	178	262	161
President	20	6.05	20	6.40	20	13.53	20	21.00	American	Dollar Line	102.0	02.2	28.0	San Francisco, Cal.	General	4,168	12,660	9,254
Polk	20	6.44	20	7.35	20	15.25	21	00.10	American	Panama-Pacific Line	574.4	80.3	23.0	San Francisco, Cal.	General	2,722	24,506	17,565
California	20	4.50	20	4.50	20	10.25	21	00.10	American	Grace Line	433.3	03.9	23.0	Talcahuano, Chile	General	1,978	11,680	7,442
Santa Clara	20	13.40	21	4.15	21	10.31	21	11.35	American	Sun Oil Co.	430.0	05.0	23.0	Los Angeles, Calif.	Ballast	2,500	6,591	4,936
Northern Sun	21	0.40	21	4.15	21	11.34	21	12.36	Danish	Imperial Freight Corp.	335.6	54.9	13.0	Antofagasta, Chile	Gen., dynamite	1,575	7,711	
Norhavet	21	2.50	21	5.35	21	13.49	21	15.00	British	Imperial Oil Co.	510.2	02.0	21.6	Talara, Peru	General	4,320	5,525	4,187
Vancouver	21	4.00	21	7.10	21	13.15	21	16.20	American	Munson, McCork & Line	375.0	33.0	20.0	Seattle, Wash.	General	4,320	5,525	4,187
Murvidnes	21	4.00	21	7.30	21	15.13	22	7.59	American	United Fruit Co.	310.0	44.2	17.11	San Francisco, Cal.	Ballast	3,436	2,141	
San Mateo	17	21.00	21	7.30	21	15.13	22	7.59	American	United Fruit Co.	310.0	44.2	17.11	San Francisco, Cal.	Ballast	3,436	2,141	
Scythian	21	6.50	21	8.05	21	16.38	21	22.30	British	Anglo-Saxon Pet. Co.	426.0	56.9	20.0	Los Angeles, Calif.	Ballast	7,149	4,927	
Borderer	21	6.50	21	8.45	21	17.20	21	22.30	American	U. S. Navy	490.0	55.2	21.3	Los Angeles, Calif.	Naval stores	1,441		
Bridge	21	8.03	21	10.25	21	19.35	21	20.55	American	Gulf Pac. Redwood Line	379.9	53.1	23.8	San Francisco, Cal.	Lumber, general	6,136	5,667	4,103
City of	21	5.20	21	9.40	21	18.40	21	19.48	British	Ellerman & Bucknall	454.0	53.3	20.6	Brisbane, Australia	General	2,192	9,194	6,915
Utowana	18	21.53	21	11.25	21	15.45	17	2.10	American	A. V. Armour	231.5	34.4	11.3	Balboa, C. Z.	Ballast	1,504	9,666	
Portland	20	4.05	21	12.09	21	20.15	22	00.18	German	Hamburg-American Line	462.2	61.2	19.6	Vancouver, B. C.	General	4,081	9,139	6,666
Call	14	18.33	21	13.03	21	21.15	21	22.20	German	Roland Line	216.5	32.9	19.6	Guaymas, Ecuador	General	100	1,105	698
Niel Maersk	21	13.08	21	20.13	22	9.18	22	10.37	Danish	Isbrandtsen Moller Co.	318.9	54.7	21.1	Baltimore, Md.	General	4,400		
Sonstad	21	18.40	21	21.13	22	10.19	22	11.48	Norwegian	Fern Line	381.6	53.3	20.3	Kobe, Japan	Cotton	4,090	6,100	4,240

τ Supply ship.

* Yacht.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Charles Christenson	15	4.20	15	6.18	15	14.55	15	14.55	American	Arrow Line	409.7	54.2	25.5	Portland, Oreg.	Lumber	7,514	6,693	4,903
Cauca	15	2.30	15	6.45	15	16.10	17	2.10	Colombian	National Navigation Co.	107.0	22.9	11.0	Portland, Oreg.	Ballast	274	1,262	161
Helo	15	6.15	15	7.33	15	15.55	17	2.10	Norwegian	Panama Mail S. S. Co.	214.2	34.2	1.0	Acajutla, Salvador	Coffee	639	1,153	722
Cuzco	14	22.10	15	9.15	15	19.00	15	23.00	Swedish	Anglo-Saxon Pet. Co.	512.0	43.4	24.6	San Francisco, Cal.	Iron ore	7,139	6,328	4,607
Amerikaland	15	22.55	16	5.58	16	19.40	16	19.40	British	Ore S. S. Corp.	401.0	72.0	34.3	Cruz Grande, Chile	Iron ore	21,650	15,560	4,496
Onondaga	15	22.10	16	7.10	16	20.00	16	20.00	American	Krusen Lumber Co.	231.0	43.6	19.0	Marchfield, Oreg.	Gasoline	2,654	2,656	1,021
Wettern Sun	15	22.45	16	7.58	16	21.15	16	21.15	American	Sun Oil Co.	489.6	63.0	29.0	Los Angeles, Calif.	Gen., nitrates	13,214	9,607	6,551
Carl Legien	15	19.00	16	8.15	16	18.45	16	22.25	German	Hamburg-American Line	409.3	53.9	23.0	Vancouver, B. C.	Wheat	6,417	7,145	5,474
Narva	15	20.30	16	8.40	16	23.30	16	23.30	British	Earl & Stoddart	402.7	52.2	23.4	Vancouver, B. C.	General	7,415	5,583	4,073
Ester	16	12.30	16	13.51	17	10.50	17	13.13	German	North German Lloyd	495.5	63.4	27.0	Vancouver, B. C.	General	3,017	10,626	6,650
Santa Maria	16	11.15	16	15.19	16	23.10	17	1.13	American	Grace Line	365.0	64.0	24.0	Talcahuano, Chile	General	3,017	10,626	6,650
Naples Maria	16	16.10	16	16.49	17	2.05	17	1.43	Japanese	Philippine Sugar Co.	385.0	51.0	26.0	New York, N. Y.	Sugar	7,700	6,207	4,070
Vergin	16	15.48	16	16.08	17	3.23	17	4.40	Danish	Isbrandtsen Moller Co.	392.2	44.2	22.4	Hull, P. I.	Sugar	4,200	3,212	2,180
Vergin Maersk	16	11.10	17	6.28	17	14.15	17	15.00	American	Panama-Pacific Line	586.4	80.3	32.0	San Francisco, Cal.	Sugar	7,360	25,254	18,170
Australia	16	5.23	17	7.30	17	15.15	17	15.15	American	The Texas Co.	509.7	70.7	29.0	Los Angeles, Calif.	General	16,742	12,514	8,427
Cauca	16	21.50	17	7.30	17	15.50	17	17.30	Belgian	Compagnie Mar. Belge	410.0	58.2	25.0	Vancouver, B. C.	Wheat, general	8,117	7,675	5,595
Tonking	17	00.50	17	3.01	17	16.30	17	18.00	Danish	East Asiatic Co.	410.0	55.2	28.0	Seattle, Wash.	Wheat, general	9,056	7,013	5,317

* For orders.

τ Motor ship.

τ Lumber, wood pulp, and automobile parts.

* Wheat, barley, and general.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Net.
Wentworth	16	23.10	17	8.24	17	17.55	17	19.05	British	R. S. Dalgliech, Ltd.	400.6	52.4	25.0	Vancouver, B. C.	Havre, France	(*)	7,260.5	5,721	4,053
Jacob	17	2.00	17	8.49	17	18.25	17	18.25	American	Lukenbach Line.	434.1	57.7	22.0	Los Angeles, Calif.	Mobile, Ala.	General	5,030	7,982	5,922
Missourian	17	2.30	17	9.15	17	19.30	17	19.30	American	Amer-Hawaiian Line.	445.0	59.8	26.0	Portland, Ore.	Boston, Mass.	Lumber, general	7,400	8,567	6,020
Bronxville	17	3.00	17	10.17	17	20.40	17	20.40	Norwegian	Sea Board Lumber Sale.	386.3	54.2	26.0	Port Alberni, B. C.	Boston, Mass.	Lumber	7,257	6,715	5,033
El Buaro	16	23.00	17	10.25	17	19.55			Ecuador	Guayaquil, Ecuador	116.5	23.1	10.0	Guayaquil, Ecuador	Cristobal, C. Z.	Ballast	264	143	
San Mateo	16	19.40	17	10.49	17	21.00			American	United Fruit Co.	315.2	44.2	23.1	San Francisco, Cal.	Cristobal, C. Z.	(*)	1,325	3,496	2,141
Dorothy	17	7.00	17	10.53	17	21.20	17	21.20	American	Lukenbach Line.	449.0	60.0	29.0	Portland, Ore.	Boston, Mass.	Lumber, general	8,500	9,294	6,861
Odenwald	16	23.00	17	12.14	17	22.25	17	23.35	German	Hamburg-American Line	399.5	54.3	25.2	Corral, Chile	Hamburg, Germany	General	7,754	6,808	4,979
Orient City	17	5.30	17	16.26	18	00.10	18	00.10	British	Reardon Smith Line.	396.5	53.5	26.0	Vancouver, B. C.	Faya	Wheat	7,963	5,979	4,419
Hardanger	17	18.35	17	19.12	18	3.15	18	7.10	Norwegian	Interoceanic S. S. Corp.	375.3	52.3	24.0	Tacoma, Wash.	Rotterdam, Holland	(*)	5,900	5,977	4,375
Stollman	17	18.30	18	6.05	18	16.20	18	16.20	British	International Pet. Co.	565.7	75.6	33.2	Talara, Peru.	New York, N. Y.	Crude oil	22,626	16,780	9,885
Aconagua	18	4.15	18	6.33	18	15.45	18	21.40	Chilean	Cia. Sud Amer. de Vap.	422.8	56.2	25.0	Valparaiso, Chile	New York, N. Y.	Gen. nitrates	4,034	7,764	4,705
Bennetton	17	19.00	18	7.21	18	17.25	19	00.15	Dutch	Royal Neth. S. S. Co.	449.7	58.2	24.5	Corral, Chile	Hamburg, Germany	General	7,046	7,849	5,806
Dintfieldt	18	0.25	18	7.49	18	18.15	19	1.15	Dutch	Holland-America Line.	435.6	62.3	30.0	Victoria, B. C.	Rotterdam, Holland	General	9,741	10,786	7,551
Rosario II	15	23.37	18	8.25	18	17.05	18	17.05	American	Col. Robert H. Morse.	90.8	20.0	6.0	Los Angeles, Calif.	Miami, Fla.	Ballast	160	114	
Sagadahoc	18	2.45	18	8.50	18	18.45	18	18.45	American	Argonaut S. S. Line.	470.5	54.2	26.0	Tacoma, Wash.	Baltimore, Md.	(*)	7,500	7,345	5,357
Navasota	18	4.35	18	9.41	18	20.05	18	20.50	British	Royal Mail S. P. Co.	430.0	61.3	25.0	Los Angeles, Calif.	Rotterdam, Holland	Chilled fruit	4,200	9,475	6,176
Tidewater	18	9.05	18	10.41	18	20.45	19	2.15	American	Tidewater Oil Co.	480.6	66.0	27.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	13,432	9,734	6,349
New Jersey	19	1.30	19	6.20	19	14.10	19	14.10	American	The Texas Co.	416.8	56.1	29.0	Los Angeles, Calif.	Providence, R. I.	Gasoline	7,695	6,925	4,932
Birmingham	18	23.00	19	6.26	19	14.55	19	14.55	American	Isthmian S. S. Lines.	395.5	55.0	27.3	Vancouver, B. C.	Aronmouth, Eng.	General	8,029	7,304	5,188
Pacific Pine	18	22.30	19	7.20	19	16.00	19	16.00	American	Dimon S. S. Corp.	410.5	54.3	26.0	Seattle, Wash.	Norfolk, Va.	Lumber, general	7,343	6,385	4,808
Arizona	19	3.45	19	8.05	19	20.25	19	20.25	American	The Texas Co.	391.8	51.3	24.0	Los Angeles, Calif.	Marcus Hook, Pa.	Gasoline	6,409	5,552	3,757
Absaroka	19	4.15	19	8.29	19	19.55	19	22.55	American	McCormick S. S. Co.	409.6	54.1	25.0	Tacoma, Wash.	Newport News, Va.	Lumber, rice, gen.	7,507	6,627	4,993
Rangitiki	19	3.05	19	11.16	19	18.50	19	18.50	British	N. Z. Shipping Co.	531.0	70.0	29.0	Auckland, N. Z.	London, England	(*)	6,146	18,197	13,526
Huntington	19	6.55	19	12.46	19	21.30	19	21.30	British	N. Z. Shipping Co.	520.4	84.2	25.0	Plymouth, N. Z.	Glasgow, Scotland	Frozen, general	7,211	12,945	9,378
Wind Rush	20	3.30	20	7.05	20	15.45	20	15.45	American	Shepard S. S. Co.	410.0	54.2	26.0	Seattle, Wash.	Philadelphia, Pa.	Lumber, general	7,394	6,958	4,753
Montanan	20	6.00	20	7.20	20	16.20	20	16.20	American	Amer-Hawaiian Line.	404.6	53.9	27.3	Seattle, Wash.	Boston, Mass.	General	7,169	6,756	4,775
Nesa Queen	20	6.00	20	7.52	20	17.40	20	19.15	American	N. O. & S. A. S. Co.	324.0	42.2	23.0	Valparaiso, Chile	New Orleans, La.	Nitrates	4,505	3,981	2,600
Grandley Hall	20	9.25	20	10.12	20	18.15	20	18.15	British	Anglo-Chilean Nit. Co.	412.3	55.7	25.0	Tocopilla, Chile	Savannah, Ga.	Nitrate of soda	8,150	6,554	4,033
Cengo	20	11.45	20	12.47	20	30.45			German	Hamburg-American Line	227.2	34.4	13.0	Guayaquil, Ecuador	Cristobal, C. Z.	(*)	5,96	1,572	1,111
Port Fairy	20	7.40	20	14.22	20	22.50	20	21.50	British	Hoibart, Tasmania	375.0	62.2	28.0	London, England	London, England	Frozen, general	7,811	10,673	7,753
Point Star	20	13.50	20	14.32	20	22.55	20	22.55	American	Swamy & Hoyt.	435.0	46.2	21.0	Portland, Ore.	New Orleans, La.	General	8,045	3,984	2,612
San Bernardino	20	14.00	20	15.08	20	23.45	20	23.45	American	Quaker Line	410.5	54.2	26.0	Portland, Ore.	Wilmington, Del.	Lumber, general	6,254	6,755	4,873
Tatsuno Maru	20	13.45	20	18.32	21	2.30	21	9.00	Japanese	Nippon Yusen Kaisha.	445.0	58.0	25.5	Holo, P. I.	New York, N. Y.	(*)	7,173	8,015	5,176

* Tanker.
 † Motor ship.
 ‡ Lumber and wood pulp.
 § For orders.
 ¶ Frozen and dairy prod.
 ** Cocoa, hides, coffee, and rice.
 †† Wheat and canned salmon.
 ††† Gasoline and lumber.
 †††† Sugar, coconut oil, tea, rice, tin, and general.
 ††††† Lumber, copper, and general.

Vermat.....	20	19-00	20	19-54	21	4-00	21	4-00	American.....	Calmar S. S. Corp.....	410.5	54.2	25.0	Aberdeen, Wash.....	Philadelphia, Pa.....	7,182	6,585	4,791
Santa Elisa.....	20	18-25	21	6-33	21	18-20	21	21-35	American.....	Grace Line.....	360.3	51.7	24.0	Valparaiso, Chile.....	New York, N. Y.....	4,100	5,957	4,325
Madras City.....	21	2-00	21	8-48	21	19-10	22	8-05	British.....	Readon Smith Line.....	383.9	53.5	24.3	Suva, Fiji Islands.....	Cristobal, C. Z.....	7,122	5,913	4,377
L-63.....	21	8-55	21	8-55	21	8-55	21	8-55	American.....	U. S. Army.....	365.0	51.0	24.0	Balboa, C. Z.....	Balboa.....	6,842		
Gibraltar.....	21	9-56	21	10-59	21	20-30	21	21-25	British.....	Wessel, Duval & Co.....	401.1	54.2	25.0	Iquique, Chile.....	Savannah, Ga.....	7,900	6,752	5,161
West Lynn.....	21	10-30	21	11-18	21	20-45	21	20-45	British.....	Sir W. R. Smith & Sons.....	450.0	58.5	28.0	Vancouver, B. C.....	London, England.....	5,806	8,561	5,815
Royal Star.....	21	11-45	21	12-29	21	22-10	22	4-50	American.....	Blue Star Line.....				N. Westminster, B. C.....	Newcastle, England.....			
Swan.....	21	12-05	21	12-05	21	19-50			American.....	U. S. Navy.....				Balboa, C. Z.....	Cristobal, C. Z.....			

24 Launch. 25 Tug. All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
February 15	Uhus.	United Fruit Co.	Port Limon, Costa Rica.	February 15	No. 9670 ²⁷ .	Pan American Airways.	San Salvador and waypts.
February 16	Cuba.	French Line.	Hayre via wayports.	February 15	No. 668-M ²⁷ .	Pan American Airways.	Miami via wayports.
February 16	Atlantis.	Royal Mail Steam Packet Co.	Southampton via waypts.	February 16	Uha.....	United Fruit Co.	New York via Habana.
February 16	Escupe Fuego ²⁶ .	Comoly & Papi.	Bluefields, Nicaragua.	February 16	Cristobal.	United Fruit Co.	New Orleans and waypts.
February 16	Magallanes.	Spanishi S. S. Line.	Cartagena, Colombia.	February 17	Orinoco.	Panama R. R. S. S. Line.	New York via wayports.
February 16	Sixaola.	United Fruit Co.	Barranquilla and waypts.	February 17	Atlantis.	Royal Mail Steam Packet Co.	Southampton via waypts.
February 16	Cundimamarca C-33 ²⁷ .	Seadta Airplane Co.	Colon, Rep. of Panama.	February 17	Orinoco.	Hamburg-American Line.	Port Limon, Costa Rica.
February 17	Inapaquina ²⁸ .	A. Tagaropolos.	Colon, Rep. of Panama.	February 17	Inapaquina ²⁸ .	A. Tagaropolos.	Colon, Rep. of Panama.
February 17	Orinoco.	Hamburg-American Line.	Hamburg via wayports.	February 18	No. 9664 ²⁷ .	Pan American Airways.	San Salvador and waypts.
February 17	No. 144-M ²⁷ .	Pan American-Grace Airways.	Talara via wayports.	February 18	No. 678-M ²⁷ .	Pan American Airways.	Miami via wayports.
February 18	Calamares.	United Fruit Co.	New York via wayports.	February 18	Escupe Fuego ²⁶ .	Comoly & Papi.	Bluefields, Nicaragua.
February 18	Zacapa.	United Fruit Co.	New York via Kingston.	February 18	Sixaola.	United Fruit Co.	New York via Kingston.
February 18	Iriona.	United Fruit Co.	New Orleans, La.	February 18	Cuba.	French Line.	Hayre via wayports.
February 18	No. 669-M ²⁷ .	Pan American Airways.	Miami via wayports.	February 19	Iriona.	United Fruit Co.	Port Limon, Costa Rica.
February 18	No. 9670 ²⁷ .	Pan American Airways.	San Salvador and waypts.	February 19	No. 145-M ²⁷ .	Pan American Airways.	Curacao via wayports.
February 19	Agafia ²⁹ .	R. Feuillebois.	Colon, Rep. of Panama.	February 19	Zacapa.	United Fruit Co.	New York via wayports.
February 20	Atlantida.	Standard Fruit & S. S. Co.	New Orleans via Habana.	February 19	Calamares.	United Fruit Co.	Port Limon, Costa Rica.
February 21	Iriona.	United Fruit Co.	Port Limon, Costa Rica.	February 19	Agafia ²⁹ .	R. Feuillebois.	Port Limon, Costa Rica.
February 21	Caledo.	Hamburg-American Line.	Port Limon, Costa Rica.	February 20	Magallanes.	Spanish S. S. Line.	Barcelona via wayports.
February 21	No. 145-M ²⁷ .	Anchor Line.	New York via wayports.	February 20	Cundimamarca C-33 ²⁷ .	Seadta Airplane Co.	Barranquilla and waypts.
February 21	No. 670-M ²⁷ .	Pan American Airways.	Curacao via wayports.	February 21	Iriona.	United Fruit Co.	New Orleans and waypts.
February 21	No. 9664 ²⁷ .	Pan American Airways.	Miami via wayports.	February 21	Atlantida.	Standard Fruit & S. S. Co.	New Orleans and waypts.
February 21	No. 144-M ²⁷ .	Pan American-Grace Airways.	Talara via wayports.	February 21	Annetta I. ²⁶ .	A. Tagaropolos.	Colon, Rep. of Panama.
February 21	Annetta I. ²⁶ .	A. Tagaropolos.	Colon, Rep. of Panama.				

²⁶ Motor schooner. ²⁷ Air mail carrier. ²⁸ Motor boat. ²⁹ Schooner.

PORT OF BALBOA.

February 17	Real ³⁰ .	Hans Elliot.	Panama Bay, R. P.	February 17	Real ³⁰ .	Hans Elliot.	Panama Bay, R. P.
February 19	Frost ³¹ .	West India Oil Co.	San Jose de Guatemala.	February 21	Neiva Panama ³¹ .	Hans Elliot.	Panama Bay, R. P.
February 20	Neiva Panama ³¹ .	Hans Elliot.	Panama Bay, R. P.	February 20	Real ³⁰ .	Hans Elliot.	Panama Bay, R. P.
February 20	Real ³⁰ .	Hans Elliot.	Panama Bay, R. P.	February 20	El Libertador ³⁰ .	A. Valdez.	Panama Bay, R. P.
February 20	El Libertador ³⁰ .	A. Valdez.	Panama Bay, R. P.	February 20	Dos Hermanos ³⁰ .	A. Valdez.	Panama Bay, R. P.
February 20	Dos Hermanos ³⁰ .	A. Valdez.	Panama Bay, R. P.				

³⁰ Motor schooner. ³¹ Motor ship.

* Other than ships passing through the Canal.

* DEPARTURES.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending February 14, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Dorelian	Leyland S. S. Line	February 8.	February 8.	(1)	60
City of Panama	Panama Mail S. S. Co.	February 8.	February 8.		1,018
Rugia.	Hamburg-American Line	February 8.	February 8.		596
Parismina.	United Fruit Co.	February 8.	February 8.		13
Pastores.	United Fruit Co.	February 8.	February 8.	24	595
Cauca.	National Navigation Co.	February 8.	February 9.	192	97
San Francisco.	Hamburg-American Line	February 8.	February 9.	43	343
Teutonia	Hamburg-American Line	February 8.	February 9.	61	26
Wiegand	North German Lloyd	February 8.	February 11.	92	214
Pearl Marie	R. Feuillebois	February 9.	February 9.		24
Ecuador	Panama Mail S. S. Co.	February 9.	February 10.	38	541
Georgio.	French Line	February 9.	February 10.	597	(2)
Baralt	Royal Netherlands S. S. Co.	February 9.	February 11.	399	26
Schwaben.	North German Lloyd	February 10.	February 10.	74	37
Caldas	National Navigation Co.	February 10.	February 10.	(2)	69
California	Nav. Libera-Triestina.	February 10.	February 10.	(1)	279
Knute Nelson	Fred Olsen & Co.	February 10.	February 10.	144	(2)
Simon Bolivar	Royal Netherlands S. S. Co.	February 10.	February 11.	223	20
Esparta.	United Fruit Co.	February 10.	February 14.	428	(2)
Ulua.	United Fruit Co.	February 11.	February 11.	314	8 1/2
Murla.	North German Lloyd	February 11.	February 11.	44	55
Lochmonar	Royal Mail S. P. Co.	February 11.	February 11.	223	76
Tela.	United Fruit Co.	February 11.	February 12.	687	49 1/2
Covalleria	Aluminium Line	February 11.	February 12.	253	(2)
Sixaola.	United Fruit Co.	February 11.	February 12.	317	325
Cristobal	Panama R. R. S. S. Line	February 11.	February 11.	2,929	
San Julian.	Pacific-Atlantic S. S. Co.	February 12.	February 12.	182	(2)
Oregon	French Line	February 12.	February 12.	74	195
Pacific Ranger	Furness, Withy & Co.	February 12.	February 13.	(1)	528
Guatemala.	Panama Mail S. S. Co.	February 12.	February 13.	762	202
Salvador	Pacific Steam Navigation Co.	February 12.	February 12.	367	
Vestvangen	Aluminium Line	February 13.	February 14.	653	64
Amapala	Standard Fruit & S. S. Co.	February 13.	February 14.	299	371
Tela.	United Fruit Co.	February 13.	February 14.	835	395
Santa Teresa.	Grace Line	February 13.	February 14.	5	253
Durazzo	Hamburg-American Line	February 14.	February 14.		102
Nosa King	N. O. & S. A. S. S. Co.	February 14.	February 14.	278	450
Martinique	Colombian S. S. Line	February 14.	February 14.	201	1
Cartago	United Fruit Co.	February 14.	February 14.	355	
Simon Bolivar	Royal Netherlands S. S. Co.	February 14.	February 14.	27	915
Kinderdijk	Holland-America Line	February 14.	February 14.	11	294
Call.	North German Lloyd	February 14.	February 14.	560	
Kwanto Maru	Osaka Shosen Kaisha	February 14.	February 14.	663	

* No cargo discharged.

* No cargo laded.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective February 20, 1931.

Commodities.	Unit.	Price.
Brass, bar, average	Lb.	\$0.24
Brass, sheet, average	Lb.	.31
Bronze, Tobin, average	Lb.	.26
Gasoline, motor grade	Gal.	.12
Metal, yellow	Lb.	.29
Oakum, Navy, spun	Lb.	.12
Oakum, Navy, unspun	Lb.	.13
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder	Gal.	1.28
Oil, burning, Colza	Gal.	1.06
Oil, engine, gas, in drums, Gullfriton Med. No. 2135	Gal.	.33
Oil, engine, gas, extra heavy, in cases, Gullfriton No. 2250	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gullfriton, No. 2250	Gal.	.41
Oil, kerosene, in drums	Gal.	.08
Oil, marine engine	Gal.	.50
Paint, lead, white, dry	Lb.	.14
Paint, lead, white, in oil	Lb.	.12
Paint, zinc oxide, dry	Lb.	.10
Paint, zinc oxide, in oil	Lb.	.11
Grease, gear, chain and wire rope, lubricating	Lb.	.05
Grease, yellow, cup, No. 3	Lb.	.08
Grease, yellow, cup, No. 5	Lb.	.09
Soda, ash	Lb.	.03
Waste, cotton, colored	Lb.	.13
Waste, cotton, white	Lb.	.16

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1931 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	From New York to Cristobal.			From Cristobal to New York.		
	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
Ancon.....	February 17..	February 22..	February 25..	March 1.....	March 4.....	March 9.....
Cristobal.....	March 3.....	March 8.....	March 11.....	March 15.....	March 18.....	March 23.....
Ancon.....	March 17.....	March 22.....	March 25.....	March 29.....	April 1.....	April 6.....
Cristobal.....	March 31.....	April 5.....	April 8.....	April 12.....	April 15.....	April 20.....
Ancon.....	April 14.....	April 19.....	April 22.....	April 26.....	April 29.....	May 4.....
Cristobal.....	April 23.....	May 3.....	May 6.....	May 10.....	May 13.....	May 18.....
Ancon.....	May 12.....	May 17.....	May 20.....	May 24.....	May 27.....	June 1.....
Cristobal.....	May 26.....	May 31.....	June 3.....	June 7.....	June 10.....	June 15.....
Ancon.....	June 9.....	June 14.....	June 17.....	June 21.....	June 24.....	June 29.....
Cristobal.....	June 23.....	June 28.....	July 1.....	July 5.....	July 8.....	July 13.....
Ancon.....	July 8.....	July 13.....	July 16.....	July 19.....	July 22.....	July 27.....
Cristobal.....	July 21.....	July 26.....	July 29.....	August 2.....	August 5.....	August 10.....
Ancon.....	August 4.....	August 9.....	August 12.....	August 16.....	August 19.....	August 24.....
Cristobal.....	August 18.....	August 23.....	August 26.....	August 31.....	September 3.....	September 8.....
Ancon.....	September 1.....	September 6.....	September 9.....	September 13.....	September 16.....	September 21.....
Cristobal.....	September 15.....	September 20.....	September 23.....	September 27.....	September 30.....	October 5.....
Ancon.....	September 29.....	October 4.....	October 7.....	October 11.....	October 14.....	October 19.....
Cristobal.....	October 14.....	October 19.....	October 22.....	October 25.....	October 28.....	November 2.....
Ancon.....	October 27.....	November 1.....	November 4.....	November 8.....	November 11.....	November 16.....
Cristobal.....	November 10.....	November 15.....	November 18.....	November 22.....	November 25.....	November 30.....
Ancon.....	November 24.....	November 29.....	December 2.....	December 6.....	December 9.....	December 14.....
Cristobal.....	December 8.....	December 13.....	December 16.....	December 20.....	December 23.....	December 28.....
Ancon.....	December 22.....	December 27.....	December 30.....	January 3.....	January 6.....	January 11.....

* Effective April 28th, steamers sail daylight saving time.
 † Due to discontinuance of the daylight saving time, departure of S. S. *Ancon*, September 29, will be at 4 p. m. standard time.
 Steamers sail at 4 p. m. from Pier 65, North River, foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 12 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Location of Patients and Visiting Hours, at Gorgas Hospital.

The following table shows the distribution of patients in the Gorgas hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Visiting Hours.
Section "A:"	
Ward 2, Semi-private, white male.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 3, American male, eye, ear, nose and throat patients.....	Tuesdays, Thursdays and Saturdays, 2.30 to 4.30 p. m., 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 4, Private rooms.....	Daily, same as Ward 2 (above).
Section "B:"	
Ward 5, Male, private rooms, American boys.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 6, Foreign, male and female, private rooms, American girls.....	
Ward 7, White females, private rooms.....	
Ward 8, Obstetrical department, white females.....	
Nursery.....	No visitors permitted in nursery.
Section "C:"	
Ward 9, Colored, male.....	Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 10, White foreign, male.....	
Ward 11, Colored, male (surgical).....	
Ward 12, Colored, male (medical).....	
Ward 13, Colored, male, G. U.....	Tuesdays, Thursdays, Saturdays, Sundays, and holidays, 2.30 to 4.30 p. m.
Ward 14, White, male, G. U.....	
Section "D:"	
Ward 15, American, male (surgical).....	Tuesdays, Thursdays, Saturdays, Sundays and holidays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.
Ward 16, American, male (medical).....	
Ward 17, Colored children.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3.00 p. m.
Ward 18, White children.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 19, Colored, female (medical).....	Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 20, Colored, female, surgical, obstetrical.....	
Isolation section.....	No visitors permitted except to visit tuberculosis patients Thursdays, Sundays and holidays, 1.30 to 3.00 p. m.

Permission to visit outside of visiting hours may be granted upon application to the Superintendent's Office. Immediate relatives of seriously ill patients will be admitted at any time by and in the discretion of the attending physician, section nurse, and in her absence, the nurse in charge.

Density of Water in Balboa and Cristobal Harbors.

Place.	Weight of sea water in ounces per cubic ft.			Rainy season. Average temperature. Degrees F.
	Average.	Maximum.	Minimum.	
Cristobal (between docks 8 and 9).....	1018	1020	1013	84.0
Balboa (dock 18).....	1011	1021	1005	83.0

(NOTE.—The above is based on two months' observations at Cristobal and Balboa. Average taken at 12-foot depth. Minimum occurred after heavy rain at 3-foot depth at Cristobal and 12-foot depth at Balboa. The weight of a cubic foot of fresh water at 85° F. is 995 ounces.

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., March 4, 1931. No. 31.

Canal Traffic During February.

During the month of February, 1931, 431 commercial vessels and 2 small launches transited the Canal. Tolls on the commercial vessels aggregated \$1,915,902.78, and on the launches \$13.08, or a total tolls collection of \$1,915,915.86.

The daily average of commercial vessels was 15.39, and the average tolls collection was \$68,425.10, as compared with an average of 15.35 transits and \$68,004.53 in tolls for the previous month, and an average of 17.54 transits and \$76,120.93 in tolls for February, 1930. The average amount of tolls paid by each of the commercial transits was \$4,445.25, as compared with \$4,428.87 for the previous month, and \$4,340.91 for February, 1930.

With respect to the number of transits traffic for the past month was the smallest since November, 1926, when 428 commercial vessels were passed through the Canal, and the lowest February traffic since 1926, when 424 vessels were transited. The daily average number of transits, however, for the past month was only slightly lower than the daily average number of transits for the preceding 7 months of the current fiscal year (15.71).

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 8 months of the current fiscal year, with the daily averages of transits and tolls, and the totals for the first 8 months of the fiscal years 1930 and 1929:

Month.	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July	488	\$2,180,511.82	15.74	\$70,339.09
August	465	2,080,230.42	15.00	67,104.21
September	458	2,057,103.58	15.26	68,570.12
October	517	2,288,982.08	16.68	73,838.13
November	479	2,098,357.36	15.96	69,945.25
December	495	2,192,583.85	15.97	70,728.51
January	476	2,108,140.42	15.35	68,004.53
February	431	1,915,902.78	15.39	68,425.10
Total, first 8 months of fiscal year 1931	3,809	16,921,812.31	15.67	69,637.09
Total, first 8 months of fiscal year 1930	4,224	18,320,231.52	17.38	75,391.90
Total, first 8 months of fiscal year 1929	4,310	18,078,071.55	17.74	74,395.35

In comparison with the first 8 months of the fiscal year 1930, the corresponding period this year has had 415 fewer transits and \$1,398,419.21 less tolls, decreases of 9.8 per cent and 7.6 per cent, respectively.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, February 28, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Net.
Californian *	21	21	20	5	25	22	13	38	American	Amer.-Hawaiian Line.	445.1	59.8	21.3	Boston, Mass.	Portland, Oreg.	General.	3,585	8,367
Recorder	21	10	30	6	00	22	14	13	British	T. & J. Harrison.	420.3	34.6	17.11	Liverpool, England	North Pacific ports.	Ballast.	6,052	4,402
Atchaf *	22	6	30	9	15	22	16	44	British	British Molasses Co.	475.0	63.3	19.6	New Orleans, La.	Hawaii.	Ballast.	9,587	6,879
Richness *	22	14	05	05	23	9	32	10	American	Dimon S. Corp.	409.0	40.4	21.0	Philadelphia, Pa.	Seattle, Wash.	General.	6,224	4,841
Pacific Spruce.	22	17	40	3	55	23	10	33	Swedish	Transatlantic S. Co.	377.0	34.2	14.0	Los Angeles, Calif.	Los Angeles, Calif.	Ballast.	6,235	4,486
Roxen.	22	19	35	3	50	23	11	28	Japanese	Kokusan Kaisha.	400.0	33.0	25.0	Port Tampa, Fla.	Kobe, Japan.	General.	6,055	5,231
Bayo Maru.	23	5	45	7	20	23	15	35	British	British Government.	702.0	106.0	31.6	Kingston, Jamaica.	Balboa, C. Z.	Ballast.	5,147	3,946
Nelson *	23	5	01	9	05	23	17	25	American	U. S. Navy.	461.0	60.0	29.6	Norfolk, Va.	Bellingham, Wash.	Fuel oil.	5,147	3,946
Ponybryn.	22	22	05	7	45	23	19	20	Norwegian.	Andrew Weir & Co.	371.0	31.4	15.0	Baltimore, Md.	Vancouver, B. C.	Steel, general.	7,193	7,611
Steel Ranger.	22	22	15	8	55	23	17	35	American	Isthmian S. S. Lines	424.2	59.2	25.0	Baltimore, Md.	Vancouver, B. C.	Steel, general.	7,442	5,132
Algrid *	23	1	35	3	50	23	18	33	Norwegian.	Anglo-Saxon Vet. Co.	420.3	37.2	19.4	Antwerp, Belgium.	Los Angeles, Calif.	Ballast.	1,665	6,990
Alaska.	22	22	10	11	05	23	18	53	French.	French Line.	425.0	55.0	19.3	Havre, France.	Corral, Chile.	General.	3,720	5,997
Ashtaburn *	22	8	35	23	11	40	23	19	British	Amer. & Australian Line	400.0	52.0	18.6	New York, N. Y.	Noumea, New Cal.	Oil, general.	36	21
Southern	23	8	15	23	19	00	23	50	British	D. G. Dunn.	50.0	14.0	7.6	Greenock, England	Brisbane, Australia	Ballast.	3,455	11,724
Invest *	22	10	35	23	15	00	23	20	Dutch.	N. Pacific Coast Line.	490.0	64.6	21.6	Rotterdam, Holland	Vancouver, B. C.	General, bananas	2,404	7,141
Delidijk	23	16	33	04	01	24	22	08	German	Hamburg-American Line	436.0	34.0	25.0	Hamburg, Germany	Valparaiso, Chile.	General.	1,962	6,373
Emil Kirdorf.	23	10	34	0	35	24	19	20	American	U. S. Army.	410.3	54.3	18.5	Brooklyn, N. Y.	San Francisco, Cal.	Army supplies.	550	550
Canal *	23	20	09	24	3	05	24	15	American	Quaker Line.	410.3	54.3	18.5	Philadelphia, Pa.	Tacoma, Wash.	General.	2,816	9,414
San Simon.	24	00	50	24	5	05	24	12	Japanese	Oosaka Shosen Kaisha.	461.0	61.0	21.3	Boston, Mass.	Hongkong, China.	Gen., tobacco.	4,148	6,387
Kamaui	24	1	15	24	6	20	24	07	British	Barber S. S. Line.	424.2	33.0	21.0	New York, N. Y.	Shanghai, China.	General.	1,510	5,659
Bolton Castle.	24	1	30	24	6	55	24	15	American	Nelson Line.	380.0	33.1	17.0	New York, N. Y.	Seattle, Wash.	General.	490	1,076
Charles Nelson.	24	6	35	24	7	20	24	17	American	Act. Pacific Nav. Co.	232.0	30.0	15.0	Antwerp, Belgium	Tahiti, Soc. Islands	Wines, spirits	6,811	7,381
Prince Albert.	24	6	55	24	8	15	24	18	British	Calmar S. S. Corp.	400.0	46.2	25.0	Baltimore, Md.	Seattle, Wash.	Steel, general.	352	2,874
Alman.	23	17	35	24	14	20	24	35	American	Panama R. R. S. S. Line.	281.0	43.0	17.0	New York, N. Y.	Guayaquil, Ecuador	General.	601	7,827
Guayaquil.	23	17	35	24	14	20	24	35	British	Donaldson Brothers.	425.0	56.0	17.3	Glasgow, Scotland.	Vancouver, B. C.	General.	8,025	7,611
Gregatta.	24	11	49	24	10	35	24	11	American	Isthmian S. S. Lines.	425.0	56.0	26.11	Baltimore, Md.	Hongkong, China.	General, steel.	4,000	9,294
Antonson City.	24	11	49	24	10	35	24	11	American	Isthmian S. S. Lines.	425.0	56.0	26.11	Baltimore, Md.	Hongkong, China.	General, steel.	6710	4,458
J. Lukenbaech.	24	16	25	24	20	25	25	10	French.	Lukenbaech Line.	448.0	60.0	22.0	Boston, Mass.	Seattle, Wash.	General.	3,068	7,079
Wisconsin	24	16	25	24	20	25	25	10	French.	French Line.	448.0	60.0	22.0	Boston, Mass.	Vancouver, B. C.	General.	1,813	6,033
Rochester *	24	16	00	24	3	30	25	03	American	U. S. Navy.	380.0	47.7	20.0	High seas.	Balboa, C. Z.	Ballast.	5,352	7,553
Lowater *	25	1	00	25	5	10	25	15	American	Amer.-Hawaiian Line.	307.7	33.7	23.1	Boston, Mass.	Seattle, Wash.	General.	5,352	7,553
Venezuela.	24	5	35	25	6	10	25	14	American	Panama Mail S. S. Co.	380.0	48.7	20.0	New York, N. Y.	San Francisco, Cal.	General.	5,352	7,553
Georg.	24	5	35	25	6	10	25	14	American	Panama Mail S. S. Co.	380.0	48.7	20.0	New York, N. Y.	San Francisco, Cal.	General.	5,352	7,553
Washington *	25	7	30	25	7	40	25	15	Norwegian.	Fred Olsen & Co.	425.5	55.3	22.0	Antwerp, Belgium.	Vancouver, B. C.	General, iron.	3,720	5,997

* Tanker. * Motor ship. * Battleship. * Yacht. * Cruiser.

California Standard 1, 2	25 13.40	25 14.30	25 23.12	25 12.15	American	Standard Oil Co.	153.0	68.2 24.0	London, England	San Francisco, Cal.	Ballast	11, 719	8, 619
Black Douglas 4	25 10.25	25 14.30	25 22.55	1 9.10	American	Robert C. Robbling	150.0	32.0 12.0	Norfolk, Va.	Galapagos Island	Ballast	373	238
Gen. G. W.													
Getty 7	25 21.25	25 8.45	25 15.25	25 9.55	American	U. S. Army	89.0	22.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast	6, 931	4, 999
Roonke 2	25 30.45	25 1.30	25 9.05	26 11.30	American	The Texas Co.	416.8	56.1 21.0	Baltimore, Md	Los Angeles, Calif.	Ballast	7, 481	4, 975
S. C. T. Dodd	25 21.30	25 2.55	25 10.36	26 11.30	American	Shell Oil Co.	425.0	57.1 19.6	Fall River, Mass	Los Angeles, Calif.	Ballast	929	466
Vagabondia 4	25 3.40	25 5.40	25 13.12	27 19.30	American	W. L. Melon	201.6	34.0 12.0	Miami, Fla.	Galapagos Island	Ballast	5, 572	4, 134
Fordleford 2	25 3.40	25 5.40	25 13.18	26 14.25	Norwegian	Canadian Transp. Co.	378.8	50.2 16.0	Turks Island	Vancouver, B. C.	Salt	480	
Point Bonita	25 3.30	25 6.50	25 14.56	26 18.15	American	Gulf-Pacific Line	324.0	46.2 22.0	Corpus Christi, Tex.	Seattle, Wash.	General	3, 398	3, 984
Jedmore 2	25 9.25	25 8.20	25 17.20	26 20.30	British	Continental Grain Co.	52.5	14.0	South Shields, Eng.	Vancouver, B. C.	Ballast	6, 060	6, 015
Julia													
Lukenbach	26 12.20	25 14.30	26 22.10	26 23.00	American	Lukenbach Line	436.0	57.0 25.0	Houston, Tex.	Seattle, Wash.	General	4, 655	8, 543
Steele	26 7.15	27 00.01	27 9.30	27 10.20	American	Ore S. Corp.	550.3	72.0 19.8	Baltimore, Md	Cruz Grande, Chile	Ballast	15, 551	4, 297
Rauglane 2	26 19.35	27 2.25	27 10.35	27 18.15	British	N. Z. Shipping Co.	531.0	70.0 26.8	London, England	Auckland, N. Z.	General	6, 123	18, 205
Cuyama 1	25 14.40	27 3.00	27 12.08	27 18.15	American	U. S. Navy	455.0	56.0 28.1	Cristobal, C. Z.	Balboa, C. Z.	Fuel oil	6, 123	18, 205
Constance													
Chandler	27 1.15	27 5.15	27 15.41	27 17.00	American	Arrow Line	409.6	54.2 16.0	Baltimore, Md	Seattle, Wash.	General	2, 219	6, 621
Willbros	27 6.40	27 6.55	27 16.38	28 3.46	American	Amer-Hawaiian Line	414.0	55.0 19.0	Baltimore, Md	Seattle, Wash.	General	2, 582	7, 717
Markland 1	27 7.25	27 7.50	27 17.31	28 18.58	Norwegian	Standard Shipping Co.	408.3	55.3 19.0	Marseilles, France	Talara, Peru	Ballast	6, 474	4, 321
Cerigo	20 20.45	27 10.40	27 18.28	28 19.30	German	Hamburg-American Line	297.2	34.4 14.6	Cristobal, C. Z.	Guayaquil, Ecuador	General	75	1, 572
Caldas 2	20 18.55	27 10.34	27 18.20	28 21.20	Colombian	National Navigation Co.	116.0	21.1 9.6	Cristobal, C. Z.	Buenaventura, Col.	General	200	211
Migrant 4	27 12.50	27 13.30	2 10.54	28 10.54	American	Carl Tucker	200.0	34.2 15.6	Key West, Fla.	Pearl Island, R. P.	Ballast	686	332
Virgilio 2	26 7.40	27 23.35	28 9.18	28 16.55	Italian	Nav. Gen. Italiana	484.0	62.0 24.3	Genoa, Italy	Valparaiso, Chile	General	2, 286	12, 941
St. Mihiel 5	26 22.03	28 1.15	28 10.10	28 10.10	American	U. S. Army	436.0	58.0 24.8	Brooklyn, N. Y.	Balboa, C. Z.	Army supplies	646	
Neches 1	26 20.45	28 2.05	28 11.19	28 20.10	American	U. S. Navy	455.0	55.0 27.1	Cristobal, C. Z.	Balboa, C. Z.	Fuel oil	2, 037	6, 255
Santa Rita 2	27 12.00	28 3.48	28 12.13	28 16.55	American	Grace Line	370.0	52.0 22.5	New York, N. Y.	Valparaiso, Chile	General	240	2, 352
Corinto	22 16.40	28 6.40	28 16.00	28 16.55	American	Panama Mail S. S. Co.	261.0	40.0 14.0	Cristobal, C. Z.	San Francisco, Cal.	General, steel	3, 967	2, 929
Suriname	24 13.45	28 6.15	28 16.04	1 6.50	American	United Fruit Co.	336.7	41.9 17.6	Cristobal, C. Z.	San Francisco, Cal.	Ballast	176	6, 478
Nrgada	27 22.25	28 7.20	28 17.15	28 18.40	Chilean	R. W. James & Co.	410.9	50.7 17.1	New York, N. Y.	Valparaiso, Chile	General	2, 300	4, 917
Stensby 2	27 23.45	28 8.55	28 18.04	28 19.00	Danish	West Indian Trad. Co.	350.2	50.8 17.1	Aalborg, Denmark	Corinto, Nicaragua	General	4, 203	9, 173
Vincoor 2	28 6.40	28 9.00	28 18.25	1 1.29	British	W. Runciman & Co.	375.0	52.6 21.0	Antwerp, Belgium	Wellington, N. Z.	Basic slag	4, 003	6, 099
Silverteak 2	28 11.15	28 11.25	28 18.55	28 20.00	British	Kerr Line	456.0	62.0 19.3	Boston, Mass.	Pennang, Straits Set.	General	4, 001	9, 576
Nehaskan	28 12.45	28 13.20	28 20.43	28 22.00	American	Amer-Hawaiian Line	471.0	59.0 19.11	Boston, Mass.	Portland, Oreg.	General	3, 557	9, 082
Pacific													
Reliance 1	28 7.05	28 19.55	1 9.11	1 10.10	British	Furness, Withy & Co.	436.0	63.1 18.9	Glasgow, Scotland	Vancouver, B. C.	General, bananas	1, 467	9, 644
Dixie Arrow 1	28 16.00	28 20.55	1 10.06	1 11.00	American	Standard Transp. Co.	468.3	60.0 19.6	Boston, Mass.	Los Angeles, Calif.	Ballast	9, 744	7, 140

7 Tug.

1 Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Aseworld 1	21 14.50	22 6.04	22 14.02	22 14.40	American	Richfield Oil Co, Calif.	429.3	59.2 27.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline	11, 588	7, 720
Empire Star	21 21.40	22 7.00	22 15.35	22 15.35	British	Blue Star Line	423.0	56.0 25.0	New Westminster, B. C.	Liverpool, England	Fruit, general	4, 638	7, 744
Corinto	22 1.30	22 8.05	22 16.40	22 16.40	American	Panama Mail S. S. Co.	231.1	40.0 17.0	Champerico, Guat.	Cristobal, C. Z.	Coffee, general	1, 349	2, 552
Hellen	22 7.00	22 8.45	22 19.52	22 20.50	Norwegian	DuPont de Nemours	400.0	52.2 26.0	Antofagasta, Chile	Wilmington, N. C.	Nitrates	7, 225	5, 780
Caldas 8	22 4.00	22 8.58	22 18.45	22 18.45	Colombian	National Navigation Co.	116.0	21.1 9.4	Buenaventura, Col.	Cristobal, C. Z.	Coffee	195	211
Patoka 2	22 9.29	22 9.29	22 18.51	23 10.15	American	U. S. Navy	477.1	60.0	Balboa, C. Z.	Cristobal, C. Z.	General	1, 185	2, 124
Sandpaper	22 9.17	22 18.45	22 18.45	22 18.45	American	U. S. Navy	187.0	35.0	Balboa, C. Z.	Cristobal, C. Z.	General	7, 500	5, 721
Muneric	22 10.30	22 11.32	22 20.45	22 21.55	American	Anglo-Chilean Nitrates	400.0	52.0 26.0	Teopallin, Chile	Lake Charles, La.	Nitrates of soda	6, 109	9, 870
Tai Shan 8	22 9.00	22 14.00	22 21.25	23 3.20	Panamanian	Barber Line	461.9	60.6 25.0	Davao, P. I.	New York, N. Y.	General	6, 109	9, 870

8 Motor ship.

9 Aircraft tender.

10 Mine sweeper.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrival at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt water draft.	From—	To—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
India ¹	22	14.30	22	15.35	22	23.15	22	23.15	Danish	East Asiatic Co.	470.3	63.7	30.0	Vancouver, B. C.	Copenhagen, Den.	12,149	11,157	8,336	
Dungannon ¹	22	15.30	22	16.18	23	00.20	23	00.20	American	The Texas Co.	435.0	56.0	27.1	Los Angeles, Calif.	Pt. Arthur, Tex.	10,000	7,628	5,308	
Norbo ¹	22	16.15	22	17.00	23	1.55	23	2.45	Danish	Inter-Freighting Corp.	380.0	53.0	26.1	Antofagasta, Chile.	Charleston, S. C.	7,960	6,130	4,569	
Capt. Edw. P. Nones ¹	22	19.45	22	6.57	22	15.30	22	15.30	American	U. S. Army	101.4	23.5		Balboa, C. Z.	Cristobal, C. Z.	7,892	6,046	4,326	
El Cerro ¹	23	2.35	23	6.47	23	17.05	23	17.05	British	Anglo-Ecuia. Oilfields.	407.4	52.2	26.0	La Libertad, Ecu.	Philadelphia, Pa.	7,725	5,563	4,069	
Uganda ¹	23	2.35	23	7.01	23	18.35	23	18.35	British	DuPont, New York.	402.5	52.2	25.0	Tocopilla, Chile.	Savannah, Ga.	7,525	5,563	4,069	
S-15 ¹	23	7.00	23	7.01	23	17.30	23	17.30	American	U. S. Navy	281.1	20.0		Balboa, C. Z.	Cristobal, C. Z.	7,525	5,563	4,069	
Chr. Knudsen ¹	23	7.00	23	8.21	23	19.35	23	19.35	Norwegian.	Canadian Transp. Co.	381.2	54.7	25.0	Portland, Ore.	Belfast, Ireland.	7,525	6,033	4,561	
Cragness ¹	23	12.00	23	13.28	23	20.55	23	20.55	British	Empire Shipping Co.	412.1	55.0	25.0	Vancouver, B. C.	St. Nazaire, France	7,900	7,022	5,250	
Brimanger ¹	23	17.00	23	17.45	24	1.05	24	7.50	Norwegian.	Western Shipping Co.	415.0	54.9	18.0	Vancouver, B. C.	Buenos Aires, Arg.	2,213	6,853	5,246	
Surname	23	14.15	23	6.13	24	13.45	24	13.45	American	United Fruit Co.	336.7	41.9	19.0	San Francisco, Cal.	Cristobal, C. Z.	871	3,667	2,329	
Claxton, No. 140 ¹	24	6.31	24	13.30	24	13.30	24	13.30	American	U. S. Navy	310.0	30.0		Balboa, C. Z.	Cristobal, C. Z.	9,000	8,324	6,036	
Pomona ¹	24	00.05	24	6.49	24	15.20	24	15.20	American	Weyerhaeuser Tim. Co.	440.0	56.0	28.3	Longview, Wash.	Newark, N. J.	9,000	8,324	6,036	
Gen. G. W. Getty ¹	24	5.30	24	6.53	24	15.30	24	15.30	American	U. S. Army	98.0	22.0		Balboa, C. Z.	Cristobal, C. Z.	1,436	12,533	7,516	
Colombo ¹	24	5.30	24	7.35	24	16.15	26	11.00	Italian	Nav. Gen. Italians	518.0	64.0	25.0	Valparaiso, Chile.	Genoa, Italy	6,208	7,380	5,339	
Alaskan ¹	24	7.45	24	8.25	24	19.05	24	19.05	American	Amcr.-Hawaiian Line.	415.0	53.7	24.0	Portland, Ore.	Boston, Mass.	8,407	8,552	6,236	
K. I. Luckenbach, Pacific	24	11.30	24	12.17	24	20.05	24	20.05	American	Luckenbach Line.	446.0	56.1	29.0	Portland, Ore.	Boston, Mass.	8,407	8,552	6,236	
Enterprise ¹	24	11.45	24	13.12	24	21.05	24	23.35	British	Furness, Withy & Co.	435.0	60.1	27.4	Vancouver, B. C.	Glasgow, Scotland.	8,875	9,641	6,989	
Marore ¹	24	8.10	24	16.47	25	13.40	25	13.40	American	Bethlehem Steel Corp.	550.3	72.2	34.3	Cruz Grande, Chile	Baltimore, Md.	21,100	15,551	4,297	
Cuyama ¹	25	6.26	25	7.10	25	16.05	25	16.05	American	U. S. Navy	455.0	56.0		Balboa, C. Z.	Cristobal, C. Z.	8,875	9,641	6,989	
Sapelo ¹	25	7.10	25	7.10	25	16.05	25	16.05	American	U. S. Navy	477.0	60.0		Balboa, C. Z.	Cristobal, C. Z.	8,875	9,641	6,989	
Pakeha ¹	25	5.30	25	8.11	25	16.05	25	19.10	British	Shaw, Savill & Albion.	477.5	63.1	24.3	Auckland, N. Z.	London, England.	4,700	11,018	8,057	
Acahuala ¹	25	14.20	25	17.24	26	2.30	26	2.30	British	Pacific Steam Nav. Co.	215.7	33.6	14.0	Champertoo, Guat.	Cristobal, C. Z.	452	1,273	706	
Syra ¹	25	14.40	25	15.38	26	2.35	27	14.50	German	Hamburg-American Line	307.4	43.8	16.0	Champertoo, Guat.	Hamburg, Germany	1,370	3,350	2,292	
Salinas ¹	25	14.40	25	15.49	26	2.35	27	14.50	American	U. S. Navy	463.0	60.0		Balboa, C. Z.	Cristobal, C. Z.	8,083	6,945	5,032	
Illinois ¹	26	4.00	26	6.12	26	14.20	26	14.20	American	The Texas Co.	316.8	56.1	26.0	Los Angeles, Calif.	New York, N. Y.	3,065	5,710	4,011	
El Salvador ¹	26	12.10	26	6.32	26	15.15	27	14.00	American	Panama Mail S. S. Co.	360.2	51.6	25.0	San Francisco, Cal.	New York, N. Y.	7,632	6,653	4,863	
Marian Otis Chandler ¹	25	20.35	26	7.12	26	16.10	26	16.10	American	Arrow Line.	409.6	54.1	24.3	Portland, Ore.	Norfolk, Va.	6,016	5,964	4,384	
Pennsylvania ¹	25	22.00	26	7.50	26	19.40	27	15.55	French	French Line.	400.4	51.9	26.0	San Antonio, Chile.	Havre, France	1,815	2,873	1,776	
Buenaventura ¹	26	6.00	26	8.37	26	20.05	27	1.15	American	Panama R. S. S. Line	251.0	43.0	17.0	Guayaquil, Ecuador	New York, N. Y.	1,016	2,873	1,776	
Neches ¹	26	6.15	26	9.08	26	21.55	28	2.05	American	U. S. Navy	455.7	56.2		Balboa, C. Z.	Cristobal, C. Z.	3,663	8,982	6,272	
Kmai Maru ¹	26	6.15	26	10.00	26	21.55	27	1.45	Japanese	Osaka Shosen Kaisha.	445.0	60.6	23.5	Shanghai, China.	Baltimore, Md.	3,663	8,982	6,272	
Willford ¹	26	9.15	26	10.50	26	22.45	26	22.45	American	Williams S. S. Co.	386.8	52.2	24.0	Aberdeen, Wash.	Baltimore, Md.	6,300	5,684	4,070	

¹ Tanker. ² Motor ship. ³ Mine planter. ⁴ Destroyer. ⁵ Submarine. ⁶ Tug. ⁷ Wheat, barley, lumber, and general. ⁸ Coffee, wood, hides, and bullion.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	To—
February 24	No. 945-M ³⁰	Pan American-Grace Airways	Talara via waypoints.	February 24	Heredia	United Fruit Co.	New Orleans and waypoints.
February 24	Sialia ³¹	A. M. Andrews Investment Co.	Miami via waypoints.	February 25	Vulcania	Cosulich Line	New York via waypoints.
February 25	Ancon	Panama R. S. S. Line	New York via Haiti.	February 25	No. 9664 ³⁰	Pan American Airways	San Salvador and waypoints.
February 25	Arguani	Elders & Fryffes, Ltd.	Aromouth via waypoints.	February 25	No. 670-M ³⁰	Pan American Airways	Miami via waypoints.
February 25	Tolosa	United Fruit Co.	New York via Habana.	February 25	Crynsen	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
February 25	Santa Marta	United Fruit Co.	New York via waypoints.	February 25	Arguani	Elders & Fryffes, Ltd.	Aromouth via waypoints.
February 25	Tela	United Fruit Co.	New Orleans, La.	February 25	Agnete Maersk	Aluminium Line	New Orleans and waypoints.
February 25	No. 669-M ³⁰	Pan American Airways	Houston, Tex.	February 26	Tela	United Fruit Co.	Bocas, Rep. of Panama.
February 25	No. 9685 ³⁰	Pan American Airways	Miami via waypoints.	February 26	No. 144-M ³⁰	Pan American-Grace Airways	Talara via waypoints.
February 27	Darien	Leyland S. S. Line	San Salvador and waypoints.	February 26	Santa Marta	United Fruit Co.	Colombian ports.
February 27	Camden	Colombian S. S. Line	Liverpool via waypoints.	February 27	Darien C-35 ³⁰	United Fruit Co.	Port Limon, Costa Rica.
February 27	Baracao	Colombian S. S. Line	New York via waypoints.	February 28	Annetta I. ³²	Seadla Airplane Co.	Barranquilla and waypoints.
February 27	Duchess of Bedford	United Fruit Co.	Curacao via waypoints.	February 28	Carmelita ³³	A. N. Bryan	Colon, Rep. of Panama.
February 28	Cefalu	Canadian-Pacific Steamship Co.	New York via waypoints.	February 28	Tela	United Fruit Co.	Colon, Rep. of Panama.
February 28	Crynsen	Royal Netherlands S. S. Co.	New Orleans and Habana.	February 28	Cefalu	Standard Fruit & S. S. Co.	New Orleans and waypoints.
February 28	No. 309-N ³⁰	Pan American Airways	Bocas, Rep. of Panama.	February 28	Duchess of Bedford	Canadian Pacific Steamship Co.	New Orleans and waypoints.
February 28	No. 668-M ³⁰	Pan American Airways	Curacao via waypoints.	February 28	Baracao	Royal Netherlands S. S. Co.	Amsterdam and waypoints.
February 28	No. 9664 ³⁰	Pan American Airways	Miami via waypoints.	February 28		Colombian S. S. Line	New York via Kingston.
February 28	Parismina	Pan American-Grace Airways	Talara via waypoints.				
February 28	Annetta I. ³²	United Fruit Co.	San Salvador and waypoints.				
February 28	Carmelita ³³	A. N. Bryan	Talara via waypoints.				
February 28			Colon, Rep. of Panama.				
			Colon, Rep. of Panama.				

³⁰ Air mail carrier. ³¹ Yacht. ³² Motor boat. ³³ Motor schooner. PORT OF BALBOA.

February 22	Sveadrott ³⁴	Knutsen Line	Vancouver, B. C.	February 24	Sveadrott ³⁴	Knutsen Line	Antofagasta, Chile.
February 28	Real ³⁵	Hans Elliot	Panama Bay, R. P.	February 26	Real ³⁵	West India Oil Co., N. Y.	Talara, Pan.
February 28	Montebello	Union Oil Co., Calif.	Los Angeles, Calif.	February 28	Montebello	Hans Elliot	Panama Bay, R. P.
				March 2	Montebello	Union Oil Co., Calif.	Los Angeles, Calif.

³⁴ Motor ship. ³⁵ Motor schooner. * Other than ships passing through the Canal.

Census of the Canal Zone.

A compilation of census data covering the Canal Zone population as of April 1, 1930, classified by age, sex, color, and nativity, was released for publication by the Bureau of the Census on February 21, 1931. In connection with a detailed tabulation contained in the report, the announcement stated:

The total population of the Canal Zone on April 1, 1930, was 39,467, comprising 2,694 persons under 5 years of age; 3,618 from 5 to 9 years; 3,510 from 10 to 14 years; 3,705 from 15 to 19 years; 5,952 from 20 to 24 years; 4,149 from 25 to 29 years; 3,290 from 30 to 34 years; 6,932 from 35 to 44 years; 3,974 from 45 to 54 years; 1,153 from 55 to 64 years; 341 from 65 to 74 years; 104, 75 years and over, and 45 for whom age was not reported.

Of the total population of the Canal Zone, 24.9 per cent are under 15 years of age; 24.5 per cent are from 15 to 24 years of age; 36.4 per cent are from 25 to 44 years of age; 13.0 per cent are from 45 to 64 years of age; and 1.2 per cent are 65 years of age and over.

The number of persons under 1 year of age decreased from 540 in 1920 to 496 in 1930. The entire group of children under 5 years of age shows an increase from 2,590 in 1920 to 2,694 in 1930. All of the remaining age groups, exclusive of the unknown age group, show a marked increase between 1920 and 1930.

On the percentage basis, persons under 30 years of age represented the larger proportion of the total population both in 1920 and 1930, though the per cent of the total for this group for 1930 is smaller than it was in 1920. The age group, 35 to 44, recorded a larger proportion of the population in 1930 and in 1920 than did any other of the age groups.

In THE PANAMA CANAL RECORD of November 5, 1930, were published certain figures concerning the census of 1930, based on a compilation made on the Isthmus primarily to meet an immediate need for information for school and health work. Due to the necessity of forwarding the enumeration sheets to Washington without further delay it was not practicable to check the compilation thoroughly, and the reports of the Bureau of the Census indicate that corrections should be made. The total population is reported by the Bureau as 39,467, or two less than the 39,469 originally reported on the Isthmus. This was due to reporting the population of Pedro Miguel as 821, when the final check showed it as 819. The totals for the other 46 enumeration areas were correct. In the combined classification by color, however, the white population should be shown as 18,814 instead of 18,783; the total of all others as 20,653 instead of 20,686; and in the classification by sex the total males should be 26,139 instead of 26,155, the total females 13,328 instead of 13,314.

Battleship "Nelson" Leaves Canal Zone.

The battleship *Nelson*, of the Royal British Navy, flagship of the Commander-in-Chief, British Atlantic Fleet, which arrived at Balboa on February 23 to pay a formal call on the United States Fleet now visiting Balboa, returned through the Canal to Cristobal on February 28, and cleared for Portsmouth, England, via Barbados and Gibraltar, on the afternoon of the same day. The displacement of the vessel on her return voyage through the Canal was 36,494 tons, resulting in a tolls' revenue of \$18,247, or \$73 less than the \$18,320 paid on her first transit; the decrease was due to smaller displacement tonnage, occasioned by less fuel aboard.

During the vessel's visit to Balboa, many official functions were held in honor of the Commander-in-Chief of the British Atlantic Fleet, Admiral Sir Michael Hodges, and his officers. The visit was concluded with a reception by Admiral Hodges aboard the *Nelson*.

**Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Cristobal, C. Z., for Week Ending February 21, 1931.**

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Cartago	United Fruit Co.		February 15		14
Kwanto Maru	Osaka Shosen Kaisha		February 15		27
Uha	United Fruit Co.	February 15	February 15	39	631
Loreto	Pacific Steam Navigation Co.	February 15	February 16	37	31
Heilo	Panama Mail S. S. Co.	February 15	February 17	1,008	(²)
Cauca	National Navigation Co.	February 15	February 19	301	847
Cristobal	Panama R. R. S. S. Line		February 16		226
Alvarado	Pacific Steam Navigation Co.	February 16	February 16	127	14
Ammon	Hamburg-American Line	February 16	February 16	72	16
Villanger	Westfal, Larsen & Co.	February 16	February 16	(¹)	15
Carl Legien	Hamburg-American Line	February 16	February 17	5	27
Santa Maria	Grace Line	February 16	February 17	134	118
Cuba	French Line	February 16	February 18	51	534
Sixaola	United Fruit Co.	February 16	February 18	378	804
Magallanes	Spanish S. S. Line	February 16	February 20	215	466
Este	North German Lloyd	February 17	February 17	9	618
Orinoco	Hamburg-American Line	February 17	February 17	134	(²)
Tongking	Danish East Asiatic Line	February 17	February 17	(¹)	24
Chile	Danish East Asiatic Line	February 17	February 18	35	399
Baarn	Royal Netherlands S. S. Co.	February 17	February 18	79	144½
San Mateo	United Fruit Co.	February 17	February 21	1,384	(²)
Salvador	Pacific Steam Navigation Co.		February 18		332
Aconcagua	Chilean Line	February 18	February 18	6	(²)
Iriona	United Fruit Co.	February 18	February 18	684	(²)
San Anselmo	Quaker S. S. Line	February 18	February 18	85	(²)
Calamares	United Fruit Co.	February 18	February 19	400	50½
Orbita	Pacific Steam Navigation Co.	February 18	February 19	28	81
Bennekom	Royal Netherlands S. S. Co.	February 18	February 19	180	368
Dinteldijk	Holland-American Line	February 18	February 19	(¹)	81
Zacapa	United Fruit Co.	February 18	February 19	628	301
Agafa	L. Ducret	February 19	February 19	(¹)	6
Cerigo	Hamburg-American Line	February 20	February 20	596	
Santa Clara	Grace Line	February 20	February 20	141	275
Portland	Hamburg-American Line	February 20	February 21	49	205
Atlantida	Standard Fruit & S. S. Co.	February 20	February 21	107	411
Santa Elisa	Grace Line	February 21	February 21	141	34
Calli	North German Lloyd		February 21		66
Iriona	United Fruit Co.	February 21	February 21	15	258
Tatsuno Maru	Nippon Yusen Kaisha	February 21	February 21	79	(²)
Reorder	T. & J. Harrison	February 21	February 21	218	
Niel Maersk	A. P. Moller	February 21	February 21	12	(²)

¹ No cargo discharged.² No cargo laded.

**Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Balboa, C. Z., for Two Weeks Ending February 28, 1931.**

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Nosa King	N. O. & S. A. S. S. Co.	February 15	February 15	35	
Kenowis	U. S. Government	February 16	February 18	2,007	4
Loreto	Pacific Steam Navigation Co.	February 16	February 16		1
Santa Maria	Grace Line	February 16	February 16	1	2
San Mateo	United Fruit Co.	February 16	February 17	194	39
Canadian Constructor	Canadian National Steamships	February 14	February 16		1,775
Baarn	Royal Netherlands S. S. Co.	February 18	February 18	113	
Frost	West India Oil Co.	February 19	February 26		36
California	Panama-Pacific Line	February 20	February 20		163
Tatsuno Maru	Nippon Yusen Kaisha	February 20	February 21	79	
Port Fairy	Commonwealth & Dominion Line	February 20	February 20	17	
Santa Clara	Grace Line	February 20	February 20	207	175
San Mateo	United Fruit Co.	February 21	February 21		2
Tai Shan	Barber Line	February 22	February 22	210	
Sveadrott	Knutsen Line	February 22	February 24	1,010	
Suriname	United Fruit Co.	February 23	February 24	29	
Prince Albert	Atlantic-Pacific Navigation Co.	February 24	February 26	7	196
Cambrai	U. S. Government	February 24	February 24	12	18
Emil Kirdorf	Hamburg-American Line	February 24	February 24	191	
San Simeon	Pacific-Atlantic S. S. Co.	February 24	February 24	160	
Venezuela	Panama Mail S. S. Co.	February 25	February 25	14	1
El Salvador	Panama Mail S. S. Co.	February 25	February 26	11	25
Acajutla	Pacific Steam Navigation Co.	February 25	February 25	8	
Chetopa	Charles Nelson & Co.	February 26	February 26	231	
Willboro	Williams S. S. Corp.	February 27	February 27	365	

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Secretary of Navy Arrives at Balboa to View Maneuvers of Fleet.

The cruiser *Chester* of the United States Navy arrived at Cristobal on Monday morning, March 9, with the Secretary of the Navy, The Honorable Charles Francis Adams, aboard. The *Chester*, which is one of the Navy's new 10,000-ton cruisers, left Hampton Roads late Friday morning, March 6, and made the voyage in approximately 66 hours—or at an average speed of more than 26 knots—which is believed to be a record run between these two ports. The vessel transited the Canal to Balboa on the first schedule on the day of arrival and proceeded to the outer anchorage where the Secretary of the Navy boarded the U. S. S. *Texas*, flagship of the United States Fleet. Immediately after boarding the *Texas*, the vessel proceeded to join the fleet beyond Panama Bay, where the Secretary will view the remainder of the maneuvers.

Comparison of Canal Traffic in February, 1931, with February Traffic in Previous Years.

Commercial traffic through the Canal during the month of February, 1931, was the lowest February traffic since 1926, when 426 vessels were passed through the Canal. In comparison with February, 1930, traffic for the past month declined 60 transits (12.2 per cent); 234,389 net tons (9.9 per cent); and 447,681 cargo tons (18.8 per cent). In comparison with February, 1929, there was a decrease of 91 transits (17.4 per cent); 293,664 net tons (12.1 per cent); and 620,279 cargo tons (24.3 per cent).

In the tabulation below are shown the number of transits, net tonnage, Panama Canal measurement, and the tons of cargo carried through the Canal during the month of February each year from 1915 to 1931, inclusive, and for comparison, the monthly averages for the corresponding fiscal year ending on June 30, following:

Calendar year.	Month of February.			Fiscal year.	Average per month for fiscal year.		
	Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.		Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.
1915.....	* 91	317,397	423,597	1915.....	* 102	361,197	465,567
1916.....	4	694	.....	1916.....	63	199,687	257,843
1917.....	134	462,957	547,436	1917.....	150	483,213	588,213
1918.....	155	487,162	473,368	1918.....	172	547,839	627,669
1919.....	155	512,078	563,357	1919.....	169	510,416	576,385
1920.....	208	703,462	780,488	1920.....	206	712,170	781,208
1921.....	241	916,838	952,904	1921.....	241	951,323	966,601
1922.....	212	886,535	838,074	1922.....	228	951,455	907,075
1923.....	326	1,529,547	1,563,278	1923.....	331	1,550,482	1,630,656
1924.....	418	2,108,879	2,243,616	1924.....	436	2,179,073	2,249,559
1925.....	379	1,789,447	1,839,619	1925.....	389	1,904,596	1,996,570
1926.....	424	1,991,127	2,139,207	1926.....	433	2,064,549	2,169,787
1927.....	449	2,201,328	2,230,107	1927.....	456	2,185,651	2,312,351
1928.....	547	2,460,111	2,660,425	1928.....	538	2,454,886	2,469,226
1929.....	522	2,428,530	2,550,498	1929.....	534	2,468,483	2,555,250
1930.....	491	2,369,255	2,377,900	1930.....	515	2,498,385	2,502,519
1931.....	431	2,134,866	1,930,219	1931.....	* 476	2,350,488	2,183,969

* Canal opened August 15, 1914.

* Average for 10½ months.

* Average for 8 months of fiscal year.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, March 7, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Royal Arrow.....	28	20	30	1	2.05	1	10.55	1	12.10	American.....	Standard Transp. Co.	407.6	62.7	21.0	New York, N. Y.	Los Angeles, Calif.	Ballast.....	9,699	6,857
Manizales.....	27	21	08	1	6.05	1	13.28	1	14.50	German.....	Roland Line.	216.5	32.9	12.5	Cristobal, C. Z.	Guayaquil, Ecuador	General.....	252	741
Sun.....	1	00	40	1	6.25	1	14.28	1	16.00	American.....	Sun Oil Co.	480.6	66.0	22.0	Baltimore, Md.	Los Angeles, Calif.	Ballast.....	9,620	6,476
Japanese Prince.....	1	2	10	1	7.25	1	14.40	1	16.00	British.....	Furness, Withy & Co.	441.0	60.1	20.0	New York, N. Y.	Manila, P. I.	General.....	2,603	7,060
Solana.....	1	7	25	1	7.40	1	15.24	1	16.30	American.....	Tide-water Oil Co.	419.5	56.5	22.0	New York, N. Y.	San Francisco, Cal.	Ballast.....	9,060	6,152
Gymerie.....	27	1	25	1	9.10	1	16.11	1	17.05	British.....	Anglo-Saxon Pet. Co.	420.3	54.6	16.7	Curacao, D. W. I.	San Angeles, Calif.	Ballast.....	6,501	4,459
Queen Maud.....	1	10	45	1	10.55	1	17.46	1	19.00	British.....	DuPont de Nemours.	400.0	52.3	18.0	Baltimore, Md.	Talcahuano, Chile.	General.....	1,844	5,748
Plow City.....	1	14	40	1	13.00	2	10.04	2	14.10	American.....	Nelson Line.	324.0	46.0	23.0	Freeport, Tex.	San Francisco, Cal.	Sulphur.....	4,990	3,983
Abana.....	1	6	20	1	18.50	2	10.50	2	13.14	German.....	North German Lloyd.	295.0	46.0	16.0	Hamburg, Germany	Champerico, Guat.	General.....	1,421	3,069
Sveajarl.....	1	18	10	2	2.20	2	11.54	2	17.00	Swedish.....	K. Knutsen.	378.0	51.3	22.7	Oslo, Norway	Corral, Chile.	General.....	5,580	5,448
Robin Gray.....	2	2	35	2	4.00	2	12.50	2	14.05	American.....	Isfshman S. S. Lines.	424.8	55.2	24.3	Baltimore, Md.	Seattle, Wash.	General, cattle.....	7,021	7,472
Topoka.....	2	1	45	2	5.15	2	13.06	2	14.10	Norwegian.....	Canadian Transp. Co.	366.3	51.2	16.6	Turks Island.	Vancouver, B. C.	General, steel.....	5,580	5,448
Macbrinton.....	2	5	50	2	6.25	2	14.45	2	20.30	British.....	R. Chapman & Son.	412.6	55.2	16.0	Tyne, England.	Vancouver, B. C.	Salt.....	264	5,441
Seotoa.....	2	14	25	2	9.00	2	18.17	3	11.30	American.....	U. S. Navy.	149.3	30.0		Cristobal, C. Z.	Ballast.	6,823	4,712	
Los Angeles.....	2	14	25	2	20.45	3	10.26	3	11.30	German.....	Hamburg-American Line	432.0	59.0	17.6	Hamburg, Germany	Vancouver, B. C.	Towing house ^b	2,972	8,454
Canadian Miller.....	3	3	05	3	3.35	3	11.10	3	12.25	British.....	Can. Nat. Steamships.	400.0	52.0	19.0	St. John, N. B.	Vancouver, B. C.	General.....	2,710	5,892
Barat.....	26	20	09	3	6.05	3	14.33	3	15.30	Dutch.....	Royal Neth. S. S. Co.	216.0	33.0	11.2	Cristobal, C. Z.	General.	76	1,183	
Fulton.....	2	10	35	3	6.15	3	14.23	3	15.00	American.....	U. S. Navy.	200.0	35.0		High seas.	Ballast.	3,012	7,098	
Panama.....	3	17	35	3	23.20	4	9.17	4	10.26	American.....	Amer-Hawaiian Line.	407.0	53.7	19.5	Copenhagen, Den.	Seattle, Wash.	General.....	3,049	7,027
Panama.....	3	12	38	4	1.20	4	10.13	4	11.48	Danish.....	East Asiatic Co.	410.0	55.0	18.3	Copenhagen, Den.	Vancouver, B. C.	Coke, gen., iron.....	3,049	7,027
Voco.....	3	21	30	4	2.35	4	11.21	4	12.30	British.....	Vacuum Oil Co.	400.0	62.8	22.2	Wilhelmsn, Ger.	San Francisco, Cal.	Ballast.....	3,080	6,625
West Caetus.....	3	23	15	4	4.20	4	14.18	4	15.25	American.....	McCormick S. Co.	410.2	54.0	17.6	Rosario, Argentina.	Vancouver, B. C.	General.....	3,080	6,625
Hartford.....	4	5	50	4	6.55	4	15.52	4	20.20	British.....	Federal Steam Nav. Co.	520.0	64.0	28.0	Newport, England.	N. Plymouth, N. Z.	General.....	7,970	12,933
Susan V.....	3	23	45	4	7.45	4	16.50	4	17.45	American.....	Laekenbach Line.	434.3	57.7	18.0	Boston, Mass.	Seattle, Wash.	General.....	3,100	7,947
Ferrdale.....	4	4	05	4	8.40	4	17.48	4	18.50	British.....	Aberdeen, Comth Line	500.0	60.3	22.0	London, England.	Cairns, Australia.	General.....	429	11,811
Acajuda.....	26	2	30	4	9.25	4	17.25	4	18.50	British.....	Pacific Steam Nav. Co.	215.0	34.0	14.8	Cristobal, C. Z.	Champerico, Guat.	General.....	500	1,273
San Rafael.....	4	9	40	4	14.15	4	22.07	4	23.10	American.....	States S. Co.	410.0	54.0	17.0	Philadelphia, Pa.	Seattle, Wash.	General.....	3,476	6,484
Ness Chief.....	3	17	20	5	00.20	5	9.20	5	11.15	American.....	N. O. & S. A. S. Co.	385.0	40.0	18.4	New York, N. Y.	Talcahuano, Chile.	General.....	2,140	3,256
Hohoku Maru.....	2	20	40	5	2.40	5	11.15	5	18.15	Japanese.....	Kokusai Kisen Kaisha.	300.0	51.0	21.3	New York, N. Y.	Yokohama, Japan.	General.....	4,970	6,212
Intrepid.....	3	19	40	6	1.15	6	13.11	6	16.00	American.....	Transport. Prod. Co.	167.0	33.8	17.0	N. London, Conn.	San Diego, Calif.	Ballast.....	616	281
Santa Maria.....	5	16	30	6	2.10	6	8.54	6	13.35	American.....	Grace Line.	466.0	64.0	23.8	New York, N. Y.	Talcahuano, Chile.	General.....	2,307	10,626
Western Sun.....	5	17	35	6	3.40	6	11.16	6	12.30	American.....	Sun Oil Co.	385.5	66.0	21.0	New York, N. Y.	Los Angeles, Calif.	Ballast.....	9,607	6,551
Steelmaker.....	5	18	30	6	5.00	6	12.53	6	14.05	American.....	Isfshman S. S. Lines.	430.5	55.0	27.0	Mobile, Ala.	Los Angeles, Calif.	Steel, general.....	8,396	7,530
Adams.....	6	5	35	6	7.25	6	13.37	6	22.35	American.....	Dollar Line.....	502.0	62.2	27.0	New York, N. Y.	Round the world.	General.....	3,466	12,512

^a Yacht.

^b Sub-tender.

^c Motor ship.

^d Tug.

^e Tanker.

Ship	6	5	25	6	7	20	6	14	52	7	3	40	American	Panama-Pacific Line	586	4	80	3	27	4	New York, N. Y.	San Francisco, Cal.	Autos, beans, etc.
Virginia	6	5	25	6	7	20	6	14	52	7	3	40	American	Panama-Pacific Line	586	4	80	3	27	4	New York, N. Y.	San Francisco, Cal.	3,090 25, 254 18, 170
Atlantic Sun	6	8	40	6	8	50	6	16	40	6	18	15	American	Sun Oil Co.	429	3	59	2	18	0	New York, N. Y.	Los Angeles, Calif.	7,568 6, 283
Namenville	6	13	35	6	15	35	6	22	10	6	23	12	Norwegian	A. F. Klavness	442	3	59	2	18	0	New York, N. Y.	Vancouver, B. C.	8,627 6, 304
Scotia	5	13	25	6	19	20	6	16	29	6	10	55	American	U. S. Navy	380	3	30	0	0	0	Cristobal, C. Z.	Balboa, C. Z.	6,039 4, 691
St. Jerome	6	18	30	7	1	20	7	8	50	7	5	35	Danish	Strange & Co.	325	2	48	1	18	3	Boston, Mass.	Vancouver, B. C.	4,213 2, 261
La Perla	3	3	50	7	5	35	7	13	25	8	3	09	American	United Fruit Co.	437	0	21	0	0	0	Cristobal, C. Z.	San Francisco, Cal.	6,039 4, 691
S-11	7	6	30	7	6	15	7	13	33	7	21	08	British	U. S. Navy	261	0	21	0	0	0	Cristobal, C. Z.	Balboa, C. Z.	5,536 10, 041 7, 271
Port Hobart	7	6	30	7	6	15	7	13	33	7	21	08	British	Com'ith & Dom. Line.	437	0	21	0	0	0	London, England	Dunedin, N. Z.	General
Hoyanger	6	4	10	7	7	45	7	17	18	7	18	20	Norwegian	Intercean S. Corp.	382	0	54	0	12	0	Havre, France	Los Angeles, Calif.	6,289 4, 723
Arana	6	21	30	7	10	10	7	17	18	7	18	20	British	Pacific Steam Nav. Co.	303	4	43	0	15	0	New York, N. Y.	Callao, Peru	427 2, 851 1, 776
Collina	6	23	20	7	13	35	7	22	55	7	23	10	Italian	Nav. Libera-Traestica	430	0	53	0	16	10	Trieste, Italy	Vancouver, B. C.	1,702 7, 790 6, 207
Lydia	7	12	30	7	14	25	7	23	19	7	23	19	British	Canadian Transp. Co.	300	0	44	0	22	0	Halifax, N. S.	Seattle, Wash.	Steel rails, sugar
Konigsberg	7	6	40	7	15	05	7	23	12	8	4	10	German	North German Lloyd	431	0	56	3	17	9	Bremen, Germany	Valparaiso, Chile	3,929 3, 333 2, 010
Sandpiper	7	6	45	7	15	05	7	23	12	8	4	10	American	U. S. Navy	180	0	35	6	0	0	Cristobal, C. Z.	Balboa, C. Z.	2,627 7, 253 5, 012
Motor Sailer	7	7	15	7	16	00	7	16	00	7	16	00	American	U. S. Navy	180	0	35	6	0	0	Cristobal, C. Z.	Gatun, C. Z.	Ballast

Ship	28	28	22	20	1	5	12	1	14	15 <th>1 <th>14</th> <th>15 <th>American</th> <th>Cities Service Oil Co.</th> <th>431</th> <th>0</th> <th>59</th> <th>2</th> <th>25</th> <th>3</th> <th>Ventura, Calif.</th> <th>Boston, Mass.</th> <th>Gasoline</th> </th></th>	1 <th>14</th> <th>15 <th>American</th> <th>Cities Service Oil Co.</th> <th>431</th> <th>0</th> <th>59</th> <th>2</th> <th>25</th> <th>3</th> <th>Ventura, Calif.</th> <th>Boston, Mass.</th> <th>Gasoline</th> </th>	14	15 <th>American</th> <th>Cities Service Oil Co.</th> <th>431</th> <th>0</th> <th>59</th> <th>2</th> <th>25</th> <th>3</th> <th>Ventura, Calif.</th> <th>Boston, Mass.</th> <th>Gasoline</th>	American	Cities Service Oil Co.	431	0	59	2	25	3	Ventura, Calif.	Boston, Mass.	Gasoline
Betterton	28	28	20	20	1	5	12	1	14	15	1	14	15	American	Cities Service Oil Co.	431	0	59	2	25	3	Ventura, Calif.	Boston, Mass.	Gasoline
Melpomene	28	22	20	1	5	50	1	15	20	1	20	15	French	Desmaris Freres	425	8	56	9	26	0	Los Angeles, Calif.	Blaye, France	Gasoline	
Glasgow Maru	1	3	30	1	8	12	1	16	25	1	17	10	Japanese	Kokusa Kisen Kaisha	385	0	51	0	26	5	New York, N. Y.	New York, N. Y.	Sugar	
Morgenson	1	8	35	1	9	48	1	17	40	1	17	40	Norwegian	Peo. Stor. & Fin. Corp.	442	7	58	8	26	3	Los Angeles, Calif.	London, England	Gasoline	
Scotia	1	8	39	1	8	39	1	16	10	2	9	00	American	U. S. Navy	155	0	30	0	0	0	Balboa, C. Z.	Cristobal, C. Z.	Towing barge	
Brazos	2	6	14	2	6	14	2	13	35	3	10	05	American	U. S. Navy	475	0	36	0	0	0	Balboa, C. Z.	Cristobal, C. Z.	Nitrates	
Condor	2	3	55	2	6	54	2	14	45	2	16	10	Chilean	Anglo-Chilean Nitrate	356	4	45	3	25	0	Valparaiso, Chile	New York, N. Y.	Nitrates	
Iowa	2	4	15	2	7	28	2	14	25	3	10	25	French	French Line	448	9	53	3	26	5	Le Havre, France	New York, N. Y.	Nitrates	
Nosa Prince	2	6	40	2	8	33	2	17	45	2	19	25	American	N. O. & S. A. S. Co.	324	0	46	2	24	0	Talcahuano, Chile	New Orleans, La.	Nitrates, beans	
Ville de Verdun	2	3	40	2	9	57	2	19	05	3	00	10	French	French Line	409	3	53	5	26	0	Noumea, N. Calif.	Dunkirk, France	General	
Bradley	2	12	30	2	13	40	2	22	20	3	22	00	British	Reardon Smith Line	416	0	54	2	25	0	Vancouver, B. C.	Cardiff, Wales	General	
Santa Barbara	2	10	30	2	13	50	2	21	25	3	00	45	American	Grace Line	465	0	64	0	25	0	Talcahuano, Chile	New York, N. Y.	General	
Cauea	2	6	40	2	15	38	2	18	00	3	00	50	Colombian	National Navigation Co.	107	0	22	9	11	0	Buenaventura, Col.	Cristobal, C. Z.	Sugar	
Kofuku Maru	2	17	00	2	18	25	2	2	15	3	3	15	Japanese	Kokusa Kisen Kaisha	385	0	51	0	26	0	Bala, P. I.	New Orleans, La.	Sugar	
La Perla	2	13	15	2	19	50	2	3	50	3	14	44	American	United Fruit Co.	325	2	48	3	22	0	San Francisco, Cal.	Cristobal, C. Z.	Coffee, general	
Pennsylvania	2	9	30	3	6	34	3	14	05	3	14	44	American	Panama-Pacific Line	586	4	80	3	30	0	San Francisco, Cal.	New York, N. Y.	General	
St. Mihel	2	21	00	3	6	34	3	14	45	4	11	0	American	U. S. Army	448	0	30	0	25	3	Brooklyn, N. Y.	Halifax, N. S.	Crude oil	
Baltic	2	21	00	3	7	08	3	15	10	3	16	10	Danish	Standard Shipping Co.	509	5	54	0	29	0	Lobos, Peru	Halifax, N. S.	General	
Mexican	2	23	15	3	7	58	3	17	00	3	17	00	American	Amer-Hawaiian Line	472	3	57	2	27	4	Portland, Oreg.	Boston, Mass.	Nitrates	
Goslar	2	23	15	3	8	42	3	18	20	4	00	40	German	North German Lloyd	449	4	57	5	25	0	Valparaiso, Chile	Bremen, Germany	Nitrates, general	
Laurits Swenson	3	2	10	3	9	35	3	19	07	4	14	10	Norwegian	Fred Olsen & Co.	435	9	56	2	25	0	Vancouver, B. C.	Oslo, Norway	General	
Paul Luckenbach	3	3	35	3	10	19	3	19	40	3	19	40	American	Rackebach Line	471	1	59	2	27	0	Portland, Oreg.	Boston, Mass.	General	
William Penn	3	3	40	3	10	42	3	20	35	3	20	35	American	Rockwell S. S. Co.	439	6	60	2	30	0	Manila, P. I.	Philadelphia, Pa.	Sugar	
City of Victoria	3	3	30	3	11	14	3	21	25	3	21	25	British	J. Coughlan & Co., Ltd.	411	5	54	1	27	0	Port Alice, B. C.	St. Pierre, Miqton	Sugar	
Steel Mariner	3	10	45	3	11	31	3	22	20	3	22	20	American	Isishman S. S. Lines	424	2	56	2	26	0	New Orleans, La.	New Orleans, La.	Sugar	
Sirius	3	11	20	3	15	54	3	23	30	4	18	00	American	U. S. Navy	401	0	54	0	18	0	San Diego, Calif.	Key West, Fla.	General	

* Tanker.
 † Mine sweeper.
 ‡ Submarine.
 § Motor ship.
 ¶ Lumber, paper, pulp, and liquor.
 ** For orders.
 *** Nitrates, tin, cotton, and sugar.
 **** Copper, nitrates, and general.
 ***** Sugar.
 ***** Coffee, hides, and machinery.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.	
Linnea ¹ .	4	1.05	4	6.22	4	14.15	4	17.45	British.	Anglo-Saxon Pet. Co.	412.4	53.4	24.0	Los Angeles, Calif.	Lands End, Eng. ²²	Gasoline.	7,018	6,090	4,303	
Vancolite ² .	3	15.50	4	7.06	4	15.55	4	15.55	British.	Imperial Oil Co., Ltd.	510.2	68.2	30.0	Talara, Peru.	Halifax, N. S.	(*)	15,769	6,090	4,303	
Almgro.	3	20.30	4	7.28	4	19.05	4	20.30	British.	Pacific Steam Nav. Co.	303.4	30.3	21.0	Tocopilla, Chile.	New York, N. Y.	Copper, ore.	3,237	2,826	1,770	
Loekhatne.	3	21.10	4	8.41	4	20.00	4	21.00	British.	Canadian Wheat Pool.	415.0	54.2	24.0	Vancouver, B. C.	Hampton Rds., Va.	Wheat.	8,340	6,151	4,459	
England Maru.	3	23.50	4	9.15	4	20.55	4	23.00	British.	Royal Mail S. P. Co.	482.0	62.3	29.0	Vancouver, B. C.	Rotterdam, Holland.	General.	8,580	10,802	7,595	
Bessie J. ³ .	4	1.05	4	10.48	4	21.20	4	23.00	Japanese.	Kokusai Kisen Kaisha.	385.0	51.0	28.2	Pulupandan, P. I.	New York, N. Y.	Sugar.	7,700	6,214	4,665	
Balboa ⁴ .	4	8.55	4	8.55	4	22.35	4	23.00	Panamanian	Krug Judd.	16.0	8.0		Cristobal, C. Z.	Cristobal, C. Z.	Ballast.			14	
Moorchik.	4	11.21	4	11.21	4	22.35	4	23.00	Swedish.	Johnson Line.	427.0	56.2	26.0	Vancouver, B. C.	Gothenburg, Sweden.	General.	6,805	7,480	5,533	
Rialto.	4	12.25	4	13.11	5	00.15	5	16.15	Dutch.	Holland-America Line.	472.6	61.1	25.0	Vancouver, B. C.	Rotterdam, Holland.	General.	8,743	9,165	7,056	
Ethan Allen.	4	4.30	4	14.45	5	1.45	5	12.25	Italian.	Nap. Libera-Triestina.	436.6	55.4	26.0	Vancouver, B. C.	Trieste, Italy.	General.	8,837	7,789	5,981	
Huguenot.	5	2.40	5	7.07	5	13.35	5	9.15	American.	Tampa Intercoastal Co.	439.6	60.0	26.0	Manila, P. I.	New Orleans, La.	(*)	9,328	8,978	6,625	
Robin Hood.	4	19.45	5	7.25	5	16.15	5	16.15	American.	U. S. Navy.	155.0	30.0		Balboa, C. Z.	Cristobal, C. Z.	Towing barge.	9,539	7,394	5,099	
Cedar Branch.	5	1.55	5	8.31	5	17.15	5	18.20	British.	Isthmian S. S. Lines.	424.8	56.2	27.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	6,988	7,473	5,533	
Dorothy Cahill.	5	6.00	5	9.24	5	19.20	5	19.50	American.	F. & W. Ritson.	390.0	51.0	22.0	Everett, Wash.	Camden, N. J.	Lumber.	5,204	4,927	3,597	
Winnipeg.	5	7.30	5	9.51	5	18.20	6	4.55	French.	Arrow Line.	410.0	54.2	24.0	Portland, Ore.	Liverpool, England.	Lumber.	7,150	6,579	4,810	
Taranaki.	5	10.55	5	11.41	5	21.00	5	21.00	British.	Shaw, Savill & Albion.	473.4	58.8	28.0	Vancouver, B. C.	Baltimore, Md.	General.	6,750	10,539	7,513	
Orduña.	5	1.20	5	13.10	5	22.30	5	22.30	American.	R. Chapman & Son.	409.6	54.0	25.0	Pt. Chalmers, N. Z.	London, England.	Frozen, general.	6,538	11,706	8,320	
Buffalo Bridge.	4	19.30	5	14.02	5	22.55	5	22.55	British.	Pacific Steam Nav. Co.	324.0	46.2	23.0	Vancouver, B. C.	Avonmouth, Eng.	Flour, wheat.	7,970	5,761	4,429	
Fernlog.	5	12.30	5	17.36	6	00.05	6	00.05	American.	Charles Nelson & Co.	385.3	67.3	28.2	Eureka, Calif.	N. London, Conn.	Lumber, general.	3,462	3,985	2,630	
Norfolk.	5	16.00	5	17.03	6	2.05	6	4.10	Norwegian.	Strange & Co.	520.0	64.2	27.4	Vancouver, B. C.	Boston, Mass.	Lumber.	6,994	6,615	4,859	
Point Arena.	5	19.15	5	19.55	6	3.15	6	3.15	British.	Federal Steam Nav. Co.	520.0	64.2	27.4	Anekdand, N. Z.	London, England.	Frozen, general.	7,807	12,993	9,291	
Hakutsu.	5	22.40	6	6.40	6	14.20	6	14.20	American.	Swayne & Hoyt.	324.0	46.2	23.4	San Francisco, Cal.	New Orleans, La.	General.	4,377	3,984	2,612	
Maru.	5	7.35	6	9.11	6	16.45	6	14.20	Japanese.	Tatsuna Kisen Kaisha.	411.5	53.4	28.5	Manila, P. I.	New York, N. Y.	Sugar.	8,000	7,064	5,175	
Durazzo.	6	9.45	6	10.40	6	19.45	8	5.00	American.	Amer-Hawaiian Line.	407.9	53.7	26.0	Seattle, Wash.	Boston, Mass.	General.	7,038	7,107	5,041	
Gertrude.	6	13.05	6	18.24	6	20.50	6	22.00	German.	Hamburg-American Line.	227.5	34.4	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	(*)	406	1,632	1,041	
Boskoop.	6	17.30	6	18.24	6	23.50	6	22.00	Danish.	Isbrandtsen Moller Co.	418.9	54.7	26.0	Itonto, P. I.	Providence, R. I.	(*)	7,575	7,385	5,500	
Santa Inez.	6	16.40	6	16.12	7	14.50	7	23.30	American.	Royal Neth. S. Co.	400.8	58.3	25.0	Corral, Chile.	Hamburg, Germany.	Nitrates, general.	7,178	7,817	6,097	
Richardson.	6	17.16	6	17.37	7	14.50	7	23.30	American.	Grace Line.	370.0	53.2	23.0	Valparaiso, Chile.	New York, N. Y.	(*)	3,991	6,255	4,016	
Ashville.	7	7.16	7	7.16	7	20.00	7	20.00	U. S. Navy.	U. S. Navy.	550.0	55.0	28.0	Balboa, C. Z.	Cristobal, C. Z.					
Swiftwind.	5	17.15	7	8.20	7	20.10	7	20.10	American.	U. S. Navy.	425.0	61.0	29.1	Balboa, C. Z.	Cristobal, C. Z.					
Migrant.	7	9.29	7	9.29	7	22.15	7	22.15	Norwegian.	Carl Tucker.	200.3	34.0	16.0	Balboa, C. Z.	Key West, Fla.	Ballast.			8,473	6,050
Helo.	7	9.31	7	9.31	7	22.35	7	22.35	American.	Panama Mail S. S. Co.	214.2	34.3	13.0	Balboa, C. Z.	Cristobal, C. Z.	Ballast.	702	1,158	722	

¹ Tanker. ² Sugar, copra, coconut oil, and general. ³ Nitrates, copper, and coffee. ⁴ Motor ship. ⁵ Launch. ⁶ Oats, copper, nitrates, cotton, sugar, hides, and general. ⁷ Tug. ⁸ Cruiser. ⁹ Gunboat. ¹⁰ Yacht. ¹¹ Cocco, coffee, and hides. ¹² For orders. ¹³ Crude petroleum and crude oil. ¹⁴ Sugar, lumber, and general. ¹⁵ Nitrates, rubber, and general. ¹⁶ Coffee, hides, and wool. ¹⁷ All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

New Ships for Standard Fruit and Steamship Company.

The Standard Fruit and Steamship Company has announced that two new passenger and freight vessels are to be placed in its service between Cristobal and New Orleans, via wayports. The new vessels, the *Cefalu* and *Contessa*, which were constructed in 1930, are to replace the *Amapala* and *Atlantida* which have been in the company's service between Cristobal and New Orleans for the past several years. The *Cefalu* and *Contessa* are to maintain the present schedule of the line, which offers a sailing every week, on Saturdays.

The new vessels are 397 feet long, 54 feet beam, of 6,000 gross tons, and have accommodations for 90 first-class passengers.

The first vessel sailing under this new arrangement was that of the *Cefalu*, leaving Cristobal on February 28, to be followed by the *Contessa*, on March 7.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., February 25, 1931.

No. 849.

COLOMBIA, WEST COAST, BUENAVENTURA RIVER.

(1) *Light discontinued*, (2) *light marking wreck to be established*, (3) *submerged obstruction*.

(1) The Captain of the Port of Buenaventura, Colombia, has advised the Governor of The Panama Canal by letter that the flashing white light on the outer end of the pier at Buenaventura, announced established in Notice to Mariners No. 1, Washington, D. C., dated January 3, 1931, and subsequently Notice to Mariners No. 835, Balboa Heights, dated January 22, 1931, has been discontinued and in its stead electric light bulbs have been installed along the sides of the warehouse on the old or National Pier.

(2) A green acetylene gas light will be installed in the near future to mark the wreck of the S. S. *Tritonia*. Further details will be announced later.

(3) The Master of the S. S. *Santa Elisa* reports that on February 19, 1931, at 10.13 a. m. (about one hour before low water) when entering Buenaventura River in latitude 3° 48' 15" N. and longitude 77° 12' 35" W., his ship struck an uncharted obstruction which caused the ship to vibrate sharply. The ship was drawing a maximum of 25 feet and 3 inches. The chart shows a depth of 5½ to 9 fathoms in this position.

H. BURGESS,
Governor.

Traffic by Nationality for February, 1931.

The following tabulation shows the commercial traffic through the Canal during the month of February, 1931, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for February, 1930 and 1929:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	47	264,797	188,058	315,410	190,566	\$236,369.03	105,807
Chilean.....	2	9,202	7,304	13,615	8,078	9,130.00	1,558
Colombian.....	4	570	550	880	550	668.90	722
Danish.....	6	29,468	18,913	29,789	19,165	23,641.25	17,256
Dutch.....	5	24,514	17,433	28,683	17,356	19,646.20	9,625
French.....	5	28,995	18,526	34,279	19,188	21,348.50	5,067
German.....	10	38,481	26,778	43,740	26,211	33,472.50	15,446
Italian.....	3	19,712	13,294	24,886	15,093	15,095.62	3,369
Japanese.....	9	48,443	40,335	62,351	37,943	46,140.38	30,803
Norwegian.....	17	76,545	51,949	85,958	52,189	59,021.30	36,673
Panamanian.....	1	6,955	3,659	6,856	3,659	4,573.75	2,187
Swedish.....	7	35,168	22,794	47,532	28,010	25,340.78	9,081
United States.....	96	489,643	370,622	606,824	369,846	417,596.81	227,532
Total, February, 1931....	212	1,072,493	780,220	1,300,803	787,854	912,045.02	465,126
Total, February, 1930....	257	1,258,677	938,452	1,561,155	945,123	1,083,993.81	795,413
Total, February, 1929....	277	1,293,704	987,172	1,629,408	994,588	1,119,089.89	864,344

* Includes naval vessel of 36,640 displacement tons.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	10,571	8,261	12,990	7,601	\$10,326.25	17,417
British.....	55	280,749	206,682	339,336	210,003	275,003.58	342,451
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	4,084
Colombian.....	4	570	550	880	550	668.90	916
Danish.....	8	39,696	26,990	43,362	27,243	33,737.50	66,033
Dutch.....	6	28,520	20,608	33,737	20,353	25,760.00	34,988
French.....	4	21,272	15,640	26,062	16,060	19,417.05	29,111
German.....	16	63,565	42,294	71,572	42,532	52,867.50	80,809
Italian.....	3	23,369	17,813	32,011	18,538	22,266.25	20,195
Japanese.....	8	43,458	37,064	55,243	36,618	46,009.70	54,274
Norwegian.....	16	71,009	46,565	77,561	46,609	58,206.25	101,146
Panamanian.....	1	6,967	3,622	6,801	3,622	4,512.50	6,109
Swedish.....	6	26,865	19,557	51,652	24,195	24,446.25	70,829
United States.....	89	441,057	341,818	554,928	340,200	426,303.53	636,731
Total, February, 1931....	219	1,062,373	790,930	1,313,445	798,100	1,003,857.76	1,465,093
Total, February, 1930....	234	1,110,578	841,971	1,374,438	839,467	1,047,392.31	1,582,487
Total, February, 1929....	245	1,134,826	876,251	1,426,912	879,266	1,092,871.31	1,686,154

* Includes naval vessel of 36,494 displacement tons.

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	10,571	8,261	12,990	7,601	\$10,326.25	17,417
British.....	102	545,546	394,740	654,746	400,569	511,372.61	448,258
Chilean.....	3	13,907	10,770	20,925	12,054	13,462.50	5,642
Colombian.....	8	1,140	1,100	1,760	1,100	1,337.80	1,638
Danish.....	14	69,164	45,903	73,151	46,408	57,378.75	83,289
Dutch.....	11	53,034	38,046	62,420	37,709	45,406.20	44,613
French.....	9	50,267	34,166	60,341	35,248	40,765.55	34,178
German.....	26	102,046	69,072	115,312	68,743	86,340.00	96,255
Italian.....	6	43,081	31,107	56,897	33,631	37,361.87	23,564
Japanese.....	17	91,901	77,399	117,594	74,561	92,150.08	85,077
Norwegian.....	33	147,554	98,514	163,519	98,798	117,227.55	137,819
Panamanian.....	2	13,922	7,281	13,657	7,281	9,086.25	8,296
Swedish.....	13	62,033	42,351	99,184	52,205	49,787.03	79,910
United States.....	185	930,700	712,440	1,161,732	710,046	843,900.34	864,263
Total, February, 1931....	431	2,134,866	1,571,150	2,614,248	1,585,954	1,915,902.78	1,930,219
Total, February, 1930....	491	2,369,255	1,780,423	2,935,593	1,784,590	2,131,386.12	2,377,900
Total, February, 1929....	522	2,428,530	1,863,423	3,056,320	1,873,854	2,211,961.20	2,550,498

* Includes 2 transits of a naval vessel having a total of 73,134 displacement tons.

Tanker Traffic Through the Panama Canal in February, 1931.

During the month of February, 1931, 60 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 334,392, on which tolls of \$294,447.37 were paid. Cargo amounted to 301,655 tons, which included 286,667 tons of mineral oils, 8,327 tons of creosote, and 6,661 tons of coconut oil.

In point of net tonnage, tanker traffic decreased 30.4 per cent in comparison with the tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 28.7 per cent.

Tank vessels comprised 13.9 per cent of the total commercial transits through the Canal during the month; made up 15.7 per cent of the total Panama Canal net tonnage; were the source of 15.4 per cent of the tolls collected; and carried 15.6 per cent of the total cargo through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of February, 1931, segregated

by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for February, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	6	33,376	\$24,030.72	.....
French.....	1	5,050	3,636.00	.....
Norwegian.....	3	14,497	10,437.84	.....
United States.....	21	120,528	88,302.93	* 8,327
Total, February, 1931.....	31	173,451	126,407.49	8,327
Total, January, 1931.....	32	178,858	139,549.63	45,185
Total, December, 1930.....	39	215,736	159,626.57	15,360
Total, February, 1930.....	52	263,278	197,075.32	39,854
<i>Pacific to Atlantic.</i>				
Belgian.....	1	4,976	5,710.00	9,200
British.....	7	36,033	37,216.58	60,702
Norwegian.....	2	9,648	10,342.50	17,559
United States.....	19	110,284	114,770.80	* 205,867
Total, February, 1931.....	29	160,941	168,039.88	293,328
Total, January, 1931.....	46	244,211	251,904.56	428,081
Total, December, 1930.....	38	216,170	219,664.05	402,778
Total, February, 1930.....	41	217,200	223,131.27	383,119

* Creosote.

* Includes 6,661 tons coconut oil.

The following tabulation shows the tanker traffic through the Canal during February, 1931, classified according to trade routes:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
United States intercoastal.....	18	102,312	\$73,664.64	.....
United States to South America.....	2	12,037	8,666.64	.....
United States to Hawaiian Islands.....	1	6,379	4,592.88	.....
Cristobal to United States.....	1	4,543	3,270.96	.....
West Indies to United States.....	1	6,050	4,356.00	.....
Europe to United States.....	7	37,809	28,745.25	* 8,327
Europe to South America.....	1	4,321	3,111.12	.....
<i>Pacific to Atlantic.</i>				
United States intercoastal.....	18	106,371	\$110,075.20	199,206
United States to Cristobal.....	1	4,543	4,998.75	8,723
United States to Europe.....	5	23,613	25,563.75	42,118
South America to United States.....	3	17,537	19,132.50	36,620
South America to West Indies.....	1	4,964	3,574.08	.....
Philippine Islands to United States.....	1	3,913	4,695.60	* 6,661

* Creosote.

* Coconut oil.

Of the tanker traffic passing through the Canal in February, 1931, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for February, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
February, 1931.....	25	137,361	\$98,899.92	.....
January, 1931.....	22	124,796	95,151.23	18,325
December, 1930.....	27	151,619	109,165.68	.....
February, 1930.....	39	195,925	143,213.92	9,252
<i>From Los Angeles.</i>				
February, 1931.....	23	128,221	134,310.20	239,521
January, 1931.....	33	176,803	183,017.85	310,902
December, 1930.....	28	159,849	158,238.75	292,060
February, 1930.....	25	138,239	140,667.23	240,931

Dollar Steamship Line Plans Expansion of Around-the-World Service.

The Dollar Steamship Line, operating a fortnightly service of freight and passenger vessels around the world from east to west, calling at 22 ports in 14 countries, plans to establish a circumnavigation service moving eastward. The first step in the establishment of the eastward around-the-world service is to be the sailing of a *President* liner from Manila to New York on March 28, 1931, via Chinese and Japanese ports, Hawaiian Islands, San Francisco, Los Angeles, Panama Canal, and Habana.

Coincident with the inauguration of the eastbound service, the company plans to increase its westbound sailings, placing that service on a weekly basis. Under this proposed program, there will be a Dollar vessel arriving at Cristobal every Thursday afternoon in the westbound service, and one arriving every other Sunday in the opposite direction.

The Dollar Steamship Line celebrated in January the seventh anniversary of the inauguration of its westward around-the-world service and the completion of the 168th globe-girdling voyage.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 5, 1931.

No. 851.

Nicaragua, west coast, Corinto Harbor, condition and location of buoys. The following is quoted from Notice to Mariners No. 8, Washington, D. C., dated February 21, 1931:

The commanding officer of the U. S. S. *Sacramento* reports that the positions of the buoys in Corinto Harbor were checked on January 28, 1931, and found to be as follows—

- Buoy No. 1, missing (discontinued).
- Light buoy No. 2, 500 yards 320 degrees from Cardon Head Light.
- Buoy No. 3, 515 yards 350 degrees from Cardon Head Light.
- Buoy No. 4, 425 yards 132 degrees from Cardon Head Light.
- Buoy No. 5, 350 yards 74 degrees from Cardon Head Light.
- Buoy No. 6, 800 yards 135 degrees from Cardon Head Light.
- Light buoy No. 7, 760 yards 117 degrees 30 minutes from Cardon Head Light.
- Buoy No. 8, 1,160 yards 125 degrees from Cardon Head Light.
- Buoy No. 9 was in its charted position.
- Buoy No. 10, 1,500 yards 117 degrees 30 minutes from Cardon Head Light.
- Buoy No. 12, 1,115 yards 204 degrees from the dock light.
- Buoy No. 14, missing.
- Buoy No. 16, 645 yards 160 degrees from the dock light (almost sunk).
- Buoy No. 18, missing.
- Buoy No. 20, 710 yards 53 degrees from the dock light.
- Buoy No. 22, 935 yards 33 degrees from the dock light.

NOTE.—Light buoy No. 2 is reported to be 160 yards out of position, indicating that its proper location is in its previously charted position, 340 yards 312 degrees from Cardon Head Light. With the exception of Nos. 2, 4, 6, and 7, the buoys are in need of paint.

(See Notice to Mariners No. 848, Balboa Heights, dated February 21, 1931.)

H. BURGESS,
Governor.

Coal.

Coal, bunker, Navy Standard, is supplied to steamships including warships of all nations, trimmed in bunkers at \$7.25 at Cristobal and \$10.25 at Balboa per ton of 2,240 pounds. Extra charges are made in accordance with a published tariff for special trimming at the request of the officers of the ship, for galley, lump or run-of-mine coal in sacks, and for delivery, when coal is furnished from lighters or launches away from the coaling piers.

Coal can be bunkered by bunkering machines at any rate up to 1,500 tons per hour, regulated by the amount of necessary trimming.

Coal for cargo is sold at prices quoted on application and on authorization of the Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending March 7, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Orinoco	Hamburg-American Line	February 22	February 22		443
Bolivar	Colombian S. S. Line	February 22	February 22	234	124
Calamares	United Fruit Co.	February 22	February 22	50	1,172
Delftdijk	Holland-America Line	February 22	February 23	233	338
Alaska	French Line	February 22	February 23	37	3
Tai Shan	Barber S. S. Line	February 22	February 23	381	(²)
Caldas	National Navigation Co.	February 22	February 27	215	223
Corinto	Panama Mail S. S. Line	February 22	February 28	1,680	239
Guayaquil	Panama R. R. S. S. Line	February 23	February 24	1,038	4
Heredia	United Fruit Co.	February 23	February 24	8	180
Emil Kirdorf	Hamburg-American Line	February 23	February 24	5½	81
Pearl Marie	R. Feuillebois	February 24	February 24	(²)	23½
Gregalia	Donaldson Brothers	February 24	February 24	(¹)	175
Venezuela	Panama Mail S. S. Co.	February 24	February 25	78	708
Wisconsin	French Line	February 24	February 25	105	191
Crijnsen	Royal Netherlands S. S. Co.	February 24	February 25	107	8
Colombo	Italian S. S. Line	February 24	February 26	20	594
Suriname	United Fruit Co.	February 24	February 28	923	(²)
Agnete Maersk	Aluminium Line	February 25	February 25	226	(²)
Tela	United Fruit Co.	February 25	February 25	961	60
Ancon	Panama R. R. S. S. Line	February 25	February 25	2,285	
Toloo	United Fruit Co.	February 25	February 26	447	246
Santa Marta	United Fruit Co.	February 25	February 26	289	530
Buenaventura	Panama R. R. S. S. Line	February 26	February 27	45	(²)
El Salvador	Panama Mail S. S. Co.	February 26	February 27	1,365	328
Pensylvanie	French Line	February 26	February 27	510	(²)
Kinai Maru	Osaka Shosen Kaisha	February 26	February 27	49	10
Baralt	Royal Netherlands S. S. Co.	February 26	February 26	155	
Virgilio	Italian S. S. Line	February 26	February 27	223	15
Syra	Hamburg-American Line	February 26	February 27	17	741
Acajutla	Pacific Steam Navigation Co.	February 26	February 26	460	
Cerigo	Hamburg-American Line		February 27		75
Camden	United Fruit Co.	February 27		9,655	
Arizona	French Line	February 27	February 27	63	139
Santa Rita	Grace Line	February 27	February 28	105	189
Baracoa	United Fruit Co.	February 27	February 28	470½	(²)
Cefalu	Standard Fruit & S. S. Co.	February 27	February 28	143	415
Manizales	North German Lloyd	February 27	February 27	141	
Gymeric	Anglo-Saxon Petroleum Co.	February 27	February 27	8,773	
Darian	Leyland S. S. Line	February 27	February 27	476	
Pacific Reliance	Furness, Withy & Co.	February 28	February 28	(¹)	270
Oakland	Hamburg-American Line	February 28	February 28	548	208
Crijnsen	Royal Netherlands S. S. Co.	February 28	February 28	1	1,010
Tela	United Fruit Co.	February 28	February 28	72	397
Parismina	United Fruit Co.	February 28	February 28	177	
Canadian Cruiser	Canadian National Steamships	February 28	February 28	20	(²)
Ancon	Panama R. R. S. S. Line		March 1		478
Manizales	North German Lloyd		March 1		252
Parismina	United Fruit Co.		March 1		32
Toloo	United Fruit Co.	March 1	March 1	10	391
Abana	Hamburg-American Line	March 1	March 1	14	627
Santa Barbara	Grace Line	March 2	March 2	6	49
Los Angeles	Hamburg-American Line	March 2	March 2	71	47
Iowa	French Line	March 2	March 3	572	(²)
Cauca	National Navigation Co.	March 2	March 2	202	
Perou	French Line	March 2	March 4	28	922
Baralt	Royal Netherlands S. S. Co.		March 3		76
Goslar	North German Lloyd		March 3		6
Panama	Danish-East Asiatic Line	March 3	March 4	184	297
Santa Marta	United Fruit Co.	March 3	March 4	170	801
Laurits Swenson	Fred Olsen & Co.	March 3	March 4	(¹)	700
Nosa Chief	N. O. & S. A. S. S. Co.	March 3	March 5	678	60
La Perla	United Fruit Co.	March 3	March 7	1,275	(²)
Acajutla	Pacific Steam Navigation Co.	March 3	March 4		539
Iriona	United Fruit Co.	March 4	March 4	747	3
San Rafael	Quaker S. S. Line	March 4	March 4	99½	(²)
Lochkatrine	Royal Mail Steam Packet Co.	March 4	March 5	(²)	244
Moerdijk	Holland-America Line	March 4	March 5	(²)	170
Metapan	United Fruit Co.	March 4	March 5	482	417
Pastores	United Fruit Co.	March 4	March 5	588	14
Ethan Allen	Tampa Interocan Co.	March 4	March 5	229	(²)
Rialto	Navigazione Libera Triestina	March 5	March 5	(²)	298
Orduna	Pacific Steam Navigation Co.	March 5	March 6	120	16
Winnipeg	French Line	March 5	March 6	150	11
Santa Maria	Grace Line	March 5	March 6	291	161
Arana	Pacific Steam Navigation Co.	March 6	March 7	6	16
Darian	Leyland S. S. Line	March 6	March 7	(²)	979
Tuxtonia	Hamburg-American Line	March 6	March 7	550	97
Durazzo	Hamburg-American Line	March 6	March 6	412	

¹ No cargo discharged.

² No cargo laded.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cellina.....	Navigazione Libera Triestina.....	March 6.....	March 7.....	99	(²)
Contessa.....	Standard Fruit & S. S. Co.....	March 6.....	March 7.....	414	414
Bogota.....	Colombian S. S. Line.....	March 6.....	March 7.....	22	5
Cartago.....	United Fruit Co.....	March 7.....	.....	200	.....
Santa Inez.....	Grace Line.....	March 7.....	March 7.....	43	27
Colombia.....	Royal Netherlands S. S. Co.....	March 7.....	.....	99	.....
Boskoop.....	Royal Netherlands S. S. Co.....	March 7.....	March 7.....	29	376
Rio de Janeiro Maru.....	Osaka Shosen Kaisha.....	March 7.....	.....	32	.....
Konigsberg.....	North German Lloyd.....	March 7.....	March 7.....	57	94
Hielo.....	Panama Mail S. S. Line.....	March 7.....	.....	780	.....
Iriona.....	United Fruit Co.....	March 7.....	March 7.....*	12	164

* No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending March 7, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Santa Rita.....	Grace Line.....	February 28.....	February 28.....	26	175
Montebello.....	Union Oil Co.....	February 28.....	March 1.....	11,800	.....
St. Mihiel.....	U. S. Government.....	February 28.....	March 3.....	677	85
Cauca.....	National Navigation Co.....	March 2.....	March 2.....	94	28
Santa Barbara.....	Grace Line.....	March 2.....	March 2.....	1	1
La Perla.....	United Fruit Co.....	March 2.....	March 2.....	121	.....
Sirius.....	U. S. Government.....	March 3.....	March 3.....	35	2
Fulton.....	U. S. Government.....	March 3.....	.....	2	.....
Taranaki.....	Shaw, Savill & Albion.....	March 4.....	March 4.....	.....	9
Ethan Allen.....	Tampa Intercean S. S. Co.....	March 4.....	March 4.....	129	.....
Buffalo Bridge.....	Nelson S. S. Co.....	March 4.....	March 5.....	238	.....
Nosa Chief.....	N. O. & S. A. S. S. Co.....	March 5.....	March 5.....	435	8
Swiftwind.....	Shell Oil Co.....	March 5.....	March 7.....	11,578	.....
President Adams.....	Dollar Line.....	March 6.....	March 6.....	.....	1
Virginia.....	Panama-Pacific Line.....	March 6.....	March 6.....	.....	201
Santa Inez.....	Grace Line.....	March 6.....	March 7.....	29	.....
La Perla.....	United Fruit Co.....	March 7.....	March 7.....	.....	106

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective March 10, 1931.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.12
Metal, yellow.....	Lb.	.29
Oakum, Navy, spun.....	Lb.	.12
Oakum, Navy, unspun.....	Lb.	.13
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.33
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.08
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.12
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.11
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.13
Waste, cotton, white.....	Lb.	.16

Cable address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pan canal, Panama;" in the United States, "Pan canal, Washington."

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Tolls Charges for Transit of the Panama Canal.

1. Merchant vessels carrying passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity as determined by the Panama Canal Rules of Measurement..... \$ 1.20
2. Vessels in ballast, without passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity as determined by the Panama Canal Rules of Measurement..... .72
3. Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton..... .50
4. Army and navy transports, colliers, hospital ships, and supply ships, the vessel to be measured by the same rules as are employed in determining the net tonnage of merchant vessels, per net ton..... 1.20
5. Tolls may not exceed the equivalent of \$1.25 per net registered ton as determined by United States rules of measurement, nor be less than the equivalent of \$0.75 per net registered ton so determined.
6. Vessels returning from Gatun Lake or original point of entry into the Canal, without passing through the locks at the other end, are charged tolls for one passage only.
7. Vessels transiting the Panama Canal from Cristobal to Balboa and return for the sole purpose of having repairs made at the Balboa dry dock and shops will be exempt from payment of tolls, but a charge will be made for pilotage and for handling lines as provided for in the current tariff or supplements thereto.

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference.

It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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The Panama Canal Record, Balboa Heights, Canal Zone, or

The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.



Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., March 18, 1931. No. 33.

Cargo Through the Canal During February, 1931.

On pages 472 and 473 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in February, 1931. This cargo, segregated according to direction as compared with February, 1930, and the differences, is shown in the following tabulation:

	February, 1930.	February, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	795,413	465,126	-330,287
Pacific to Atlantic.....	1,582,487	1,465,093	-117,394
Total.....	2,377,900	1,930,219	-447,681

It will be noted from the above that the Atlantic to Pacific tonnage decreased 330,287 tons (41.5 per cent) as compared with February, 1930, and that from the Pacific to Atlantic decreased 117,394 tons (7.4 per cent), making a total decrease in cargo tonnage in both directions of 447,681 tons (18.8 per cent). The heavy decline in the Atlantic to Pacific tonnage was due to lightened shipments of practically all the important commodities usually routed in this direction. In the opposite direction, there were several increases in various commodities, but the curtailment in shipments of other items such as mineral oils, ores, lumber, and cold storage products was sufficient to produce the aforementioned decrease in the Atlantic-bound tonnage.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-five and four-tenths per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 29.3 per cent in Europe, these two areas contributing to almost 95 per cent of the cargo moving in this direction. In comparison with February, 1930, tonnage from the United States declined 219,675 tons, or 41.9 per cent, while that from Europe decreased 79,609 tons, or 36.8 per cent. In its relation with the total cargo passing through the Canal from the Atlantic to the Pacific, the percentage of the cargo coming from the United States was approximately the same as in February last year, while that from Europe was slightly higher in February, 1931.

Destination.—Forty-eight and seven-tenths per cent of the Pacific-bound cargo tonnage was destined to the United States; 19.4 per cent to Asia; 12.6 per cent to Australasia; and 9.8 per cent to South America. Tonnage to all these areas decreased as follows in comparison with February, 1930: To the United States, 82,018 tons, or 26.6 per cent; to Asia, 110,933 tons, or 55.1 per cent; to Australasia, 71,442 tons, or 54.9 per cent; and to South America, 52,872 tons, or 53.8 per cent.

In its relation to the total cargo, the percentage of the total cargo destined to the United States was considerably higher last month than in the corresponding month a year ago, while that to Asia, Australasia, and South America was lower.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 48.0 per cent came from the United States; 24.4 per cent from South America; 16.3 per cent from Canada; 6.4 per cent from Asia; and 3.7 per cent from Australasia. The amounts originating in Canada and Asia showed proportionate as well as actual increases in comparison with February, 1930, of 54,690 tons, or 29.7 per cent, and 22,091 tons, or 30.9 per cent, respectively. Cargo tonnage from the United States declined 36,666 tons, or 5.0 per cent, although the proportion of the total cargo in February, 1931, was slightly higher than in the corresponding month in 1930. Cargo from South America showed a decrease in its relation to the total cargo and in actual tonnage of 111,234 tons, or 23.7 per cent, as did that from Australasia which registered a decline of 39,400 tons, or 42.0 per cent.

Destination.—Segregated according to destination, 58.3 per cent of the cargo tonnage moving from the Pacific to the Atlantic went to the United States, and 38.1 per cent to Europe. Tonnage to the United States decreased 51,640 tons, or 5.7 per cent, in comparison with February, 1930, and that to Europe declined 43,054 tons, or 7.2 per cent. In their proportions to the total cargo, the tonnage to both these areas was approximately the same as in February, 1930.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify almost 87 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 13 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for February, 1930, or February, 1931, are listed in the following tabulation, showing differences:

Commodity.	February, 1930.	February, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	
Automobiles	12,396	4,026	-8,370
Cement	20,187	17,670	-2,517
Coal and coke	21,976	9,692	-12,284
Cotton	19,889	28,056	+8,167
Manufactured goods:			
Iron and steel	155,221	93,603	-61,618
Machinery	15,484	8,425	-7,059
Railroad material	11,529	1,490	-10,039
Textiles	12,096	7,356	-4,740
Tinplate	28,839	15,445	-13,394
Miscellaneous	15,257	10,839	-4,418
Metals, various	10,457	2,439	-8,018
Metal, scrap	13,104	180	-12,924
Oils, mineral	69,302	18,456	-50,846
Paper	24,315	14,609	-9,706
Phosphates	57,225	19,382	-37,843
Slag	19,984	25,817	+5,833
Sulphur	20,023	5,300	-14,723
Tobacco	13,111	8,310	-4,801

The above 18 commodity groups for February, 1931, comprise 62.6 per cent of the cargo moving from the Atlantic to the Pacific. All of the items, with the exception of cotton and slag, decreased in comparison with February, 1930.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

From the cargo declarations submitted it was possible to classify over 99 per cent of the cargo moving from the Pacific to the Atlantic during the month of February, 1931. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1930 are listed below:

Commodity.	February, 1930.	February, 1931.	Difference.
	Long tons.	Long tons.	Long tons.
Barley.....	11,459	21,084	+9,625
Beans.....	5,729	16,811	+11,082
Canned goods (fish, fruit, vegetables, etc.).....	64,208	67,861	+3,653
Coffee.....	17,935	21,562	+3,627
Cold storage (food products) *.....	58,269	31,343	-26,926
Flour.....	7,636	11,465	+3,829
Fruit, dried.....	12,447	22,499	+10,052
Fruit, fresh.....	12,634	31,493	+18,859
Lumber.....	251,946	224,682	-27,264
Metals, various.....	45,140	44,036	-1,104
Nitrates.....	184,609	155,554	-29,055
Oil, coconut.....	8,711	10,426	+1,715
Oils, mineral.....	380,319	289,936	-90,383
Ores (principally iron).....	154,554	112,003	-42,551
Sugar.....	70,899	88,420	+17,521
Wheat.....	173,169	200,998	+27,829
Wool.....	22,438	10,755	-11,683

* Does not include fresh fruit.

The above 17 commodity groups for February, 1931, comprise 92.9 per cent of the cargo moving from the Pacific to the Atlantic. Ten of the items show increases and 7 decreases, in comparison with February, 1930.

(Continued on next page.)

Libera Line Adds Two Vessels to its European-West Coast North America Service.

The Navigazione Libera Triestina (Libera Line) has announced the addition of two vessels to its service between Mediterranean ports of Europe and the west coast of North America. The first of these vessels, the *Duchessa D'Aosta*, transited the Canal on March 12, en route to the west coast in her initial voyage in this run and is to be followed by the *Timavo* in May. Each of the additional vessels, which were recently redesigned to meet the requirements of this trade, carries 58 passengers. The two steamers will be operated in conjunction with the *California* (a description of which appeared in THE PANAMA CANAL RECORD of December 17, 1930), and the motor ships *Feltre*, *Fella*, *Cellina*, and *Rialto*, all of the combination passenger and cargo type. All the vessels of the line are equipped with facilities for transporting refrigerated cargo.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 14, 1931.

No. 854.

Central America, west coast, Gulf of Fonseca, La Union approach, Chiquirin Point, lighthouse building.—The following is quoted from Notice to Mariners No. 9, Washington, D. C., dated February 28, 1931:

The second officer of the American S. S. *San Jose* reports that a lighthouse is being erected on Chiquirin Point, Gulf of Fonseca.

Approximate position: 13° 17' 30" N., 87° 46' 50" W.

H. BURGESS,
Governor.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, February, 1931.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										EUROPE.										Grand total.	Per cent of total cargo.	
	UNITED STATES.					WEST INDIES.					EUROPE.					EUROPE.							
	North Atlantic ports.	South Atlantic ports.	Total, United States.	East coast of Canada.	East coast of Central America.	Cristobal, C. Z.	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe.	Total, Europe.	East coast of South America.			India.	Africa.
NORTH AMERICA:																							
W. coast United States.	434,865	3,986	53,591	492,442	11,492	3,064	506,998	100,263	12,699	1,272	9,320	29,005	10,404	726	1,543	90	22,976	188,298	6,245	2,050	241	703,832	48.0
W. coast of Canada.	21,607	507	22,114	6,074	1,768	29,956	75,399	3,461	1,962	20,713	2,248	11,123	299	13,513	77,209	207,303	1,378	7,209	207,303	1,378	7	238,702	16.3
W. coast of Cen. Amer.	181		181		10,377	20	10,578		37	59	282	1,518	199		1,000		3,050	6,105	475			17,198	1.2
Total, N. America.	456,653	3,986	54,008	514,737	21,869	4,852	547,532	175,862	18,197	2,527	30,315	32,771	21,686	1,025	16,056	90	103,235	401,764	8,098	2,050	248	959,692	65.5
SOUTH AMERICA:																							
Chile.	112,899	78,464	15,259	206,622	1,452	2,073	210,148	7,410	5,795	1	3,546	610	156	1,158	2,473	4	55,618	76,771				286,919	19.6
Colombia.	1,726		1,726		2,262	17	4,005		17			20							37			4,042	0.3
Ecuador.	14,396		14,396		1,271		15,667					36		251					287			15,954	1.1
Peru.	26,715		26,715		14		26,729	6,674	358	200	8,123	1,395		8					1,286			44,773	3.0
W. coast South America.	1,855		1,855		429		2,284					169		3,059					195			5,707	0.4
Total, S. America.	157,591	78,464	15,259	251,314	5,429	2,090	258,833	14,084	6,170	201	11,669	2,230	156	1,409	5,540	4	57,099	98,562				337,395	24.4
AUSTRALASIA:																							
Australia.	1,973		1,973	454			2,427															2,427	0.2
New Zealand.	1,133		1,133	433	15		1,581	50,375											50,375			51,956	3.5
Total, Australasia.	3,106		3,106	887	15		4,008	50,375											50,375			54,383	3.7
ASIA:																							
Philippine Islands.	65,153		8,467	73,620			73,620															73,620	5.0
China.	2,740		2,740		469		3,209															3,209	0.2
Japan.	6,516		6,516		48	87	6,651															6,651	0.5
Far East.	2,957		2,957				2,957		7,192										7,192			10,149	0.7
Total, Asia.	77,366		8,467	85,833	511		86,431		7,192										7,192			93,623	6.4
Grand total.	694,716	82,450	77,824	854,990	6,961	27,824	7,029,896	804,240	321,243	67,920	41,984	35,001	21,842	2,434	21,596	94	160,334	557,893	8,098	2,050	248	1,465,063	100.0
Per cent of total cargo:																							
February, 1931.	47.4	5.6	5.3	58.3	0.5	1.9	0.5	61.2	16.4	1.7	0.7	2.8	2.4	1.5	0.2	1.5			10.9	38.1	0.6	100.0	0.0
February, 1930.	50.4	2.9	4.0	57.3	1.9	0.2	1.3	0.8	19.0	0.5	0.1	0.7	3.3	1.0	0.2	0.7			12.4	37.9	0.1	100.0	0.0
February, 1929.	43.8	2.6	7.4	53.8	1.9	0.2	1.1	0.3	57.3	1.3	1.2	1.3	3.5	1.3	0.2	0.3	0.9		12.7	42.1	0.1	100.0	0.0

1 General cargo not routed so as to allow segregation between definite ports. 2 Includes both local and transit cargo.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, March 14, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Amerikaland ²	7	15.05	8	00.05	8	9.10	8	10.05	Swedish	Ore S. S. Corp.	561.0	72.0	21.5	Baltimore, Md.	Cruz Grande, Chile	Ballast	15,500	4,496	
Tai Yin ²	7	22.00	8	1.40	8	9.36	8	10.30	Norwegian	Barber S. S. Line.	461.4	60.6	19.6	New York, N. Y.	Shanghai, China	General	1,649	9,997	
Durazzo	6	19.45	8	5.00	8	12.11	8	13.30	German	Hamburg-American Line	226.0	34.0	13.8	Cristobal, C. Z.	Guayaquil, Ecuador	General	132	1,633	
Rio de Janeiro	7	8.05	8	15.00	8	15.00	8	15.00	Japanese	Osaka Shosen Kaisha.	461.0	62.0	22.7	Buenos Aires, Arg	Kobe, Japan	General, cotton.	3,694	10,447	
Democracy	8	3.10	8	7.00	8	13.40	8	16.05	American	Nelson Line.	377.0	52.0	16.8	Baltimore, Md.	Seattle, Wash.	General.	2,108	5,434	
Pacific	8	3.35	8	9.50	8	17.07	8	18.12	American	Dimon S. S. Corp.	409.6	54.2	18.7	Philadelphia, Pa.	Seattle, Wash.	General.	3,790	6,537	
Liverpool Maru	8	13.25	8	13.35	8	22.33	8	22.35	Japanese	Kokusai Kisen Kaisha.	385.0	51.0	16.0	New York, N. Y.	Pto. Chicama, Peru	Ballast	5,919	4,400	
Mahana	8	1.00	8	15.00	8	22.20	8	23.25	British	Shaw, Savill & Albion.	500.9	63.0	28.5	London, England	Napier, N. Z.	General.	4,535	12,083	
Conchuda ³	8	.....	8	.....	8	9.32	.....	.....	American	J. A. Hanson	.....	.....	.....	Cristobal, C. Z.	.....	(6)	.....	.....
Hull ³	8	.....	8	.....	8	9.32	.....	.....	American	J. A. Hanson	.....	.....	.....	Cristobal, C. Z.	Gatun, C. Z.	Ballast.	.....	.....
City of Elwood ²	8	15.25	8	20.10	9	11.50	9	13.30	American	Roosevelt S. S. Co., S.B.	395.5	55.0	23.0	Newport News, Va.	Shanghai, China	Case oil, general.	5,097	7,344	
El Buaro ²	2-15	19.55	8	19.40	9	11.09	9	12.10	Ecuadorian	Anglo-Ecuador. Oilfields.	116.0	23.0	10.0	Cristobal, C. Z.	Ecuador.	Ballast.	.....	.....
Chusler ⁴	9	4.05	9	6.15	9	12.43	.....	.....	American	U. S. Navy	582.0	65.0	.....	Newport News, Va.	Balboa, C. Z.	Ballast.	.....	.....
Anzonan	8	20.20	9	6.35	9	14.45	9	15.40	American	Amer-Hawaiian Line.	434.3	57.7	17.6	Boston, Mass.	Portland, Oreg.	General.	3,189	7,983	
Forbes	8	20.40	9	7.45	9	15.09	9	16.15	American	Munson, McCor'k Line.	409.8	54.2	17.4	Philadelphia, Pa.	Tacoma, Wash.	General.	2,513	6,831	
Hauptman.	9	5.00	9	8.40	9	16.04	9	17.00	Japanese	Nippon Yusen Kaisha.	440.4	57.0	24.6	Philadelphia, Pa.	Kobe, Japan	General.	6,633	8,139	
Asuka Maru ²	9	5.00	9	8.40	9	16.04	9	17.00	Japanese	Nippon Yusen Kaisha.	440.4	57.0	24.6	Philadelphia, Pa.	Kobe, Japan	General.	6,633	8,139	
Montgomery	9	13.10	9	13.25	9	21.15	10	7.47	American	Isthmian S. S. Lines	424.0	56.2	25.3	Norfolk, Va.	Singapore, Str. Set.	Steel, general.	7,919	7,611	
City ²	9	30.50	9	13.50	9	21.15	10	7.47	American	National Navigation Co.	107.0	22.0	8.3	Cristobal, C. Z.	Buenaventura, Col.	General.	60	262	
Cauca ²	9	8.40	9	14.30	9	22.28	10	4.05	Colombian	Pacific Steam Nav. Co.	525.3	62.8	23.0	Liverpool, England	Talcahuano, Chile	General.	2,401	13,137	
Oroya.	9	8.40	9	14.30	9	22.28	10	4.05	British	Royal North Sea S. Co.	361.0	49.0	18.5	Hamburg, Germany	Corral, Chile	General.	2,374	5,117	
Holder	8	19.10	9	15.18	9	22.55	9	23.40	Dutch	Shepard S. S. Co.	410.0	54.0	19.0	Boston, Mass.	Seattle, Wash.	General.	4,896	6,625	
Sea Thrush	9	16.00	9	18.40	10	10.11	10	11.15	American	Shepard S. S. Co.	410.0	54.0	19.0	Boston, Mass.	Seattle, Wash.	General.	4,896	6,625	
Gen. M. H.	9	14.20	9	22.45	10	9.25	10	10.27	American	Sudden & Christenson.	402.6	53.0	16.7	Baltimore, Md.	Los Angeles, Calif	General.	2,610	6,575	
Sherman.	9	14.20	9	22.45	10	9.25	10	10.27	American	Sudden & Christenson.	402.6	53.0	16.7	Baltimore, Md.	Los Angeles, Calif	General.	2,610	6,575	
Gen. Wm. M.	9	9.10	9	3.05	10	15.40	10	16.30	American	U. S. Army	456.0	32.0	.....	Baltimore, C. Z.	Balboa, C. Z.	Ballast.	2,104	7,767
Graham ⁵	9	9.10	9	3.05	10	15.40	10	16.30	American	U. S. Army	456.0	32.0	.....	Baltimore, C. Z.	Balboa, C. Z.	Ballast.	2,104	7,767
San Jose ²	9	9.10	9	3.05	10	15.40	10	16.30	French	French Line.	431.3	57.2	19.10	Havre, France	Vancouver, B. C.	General.	2,104	7,767	
Fort	9	14.30	10	4.40	10	15.48	11	17.00	American	Nelson Line.	324.0	46.2	24.0	Freeport, Texas	San Francisco, Cal.	Sulphur	4,759	3,984	
Armstrong.	9	9.40	10	6.12	10	14.04	11	17.00	American	Panama Mail S. S. Co.	360.0	51.0	22.6	New York, N. Y.	San Francisco, Cal.	General.	1,576	5,776	
Guatemala.	9	22.20	10	6.50	10	16.32	10	17.40	American	Tex. Gulf & Freeport Sul.	356.0	51.6	23.6	Freeport, Texas	Everett, Wash.	Sulphur	5,205	5,349	
German Frisch.	10	9.40	10	10.30	10	17.17	10	18.23	American	Standard Transp. Co.	408.3	62.7	21.6	Providence, R. I.	Los Angeles, Calif	Ballast.	9,841	6,946	
Levant Arrow ²	10	9.40	10	10.30	10	17.17	10	18.23	American	Standard Transp. Co.	408.3	62.7	21.6	Providence, R. I.	Los Angeles, Calif	Ballast.	9,841	6,946	
Santa Cecilia.	10	5.40	10	10.00	10	18.30	.....	.....	American	Argonaut S. S. Line.	404.0	54.0	27.8	New York, N. Y.	Vancouver, B. C.	Steel, general.	7,607	6,745
Sacramento	10	11.40	10	11.55	10	18.55	10	20.00	British	Reardon Smith Line.	402.0	54.3	14.3	Cardiff, England	Vancouver, B. C.	Ballast.	.....	.....
Valley.	10	11.40	10	11.55	10	18.55	10	20.00	British	Reardon Smith Line.	402.0	54.3	14.3	Cardiff, England	Vancouver, B. C.	Ballast.	.....	.....

¹ Tanker. ² Motor ship. ³ Launch. ⁴ Cruiser. ⁵ Mine planter. ⁶ Towing launch Hull. ⁷ Phosphate rock, lubricating oil, etc.

Ohioan.....	10	13	20	10	13	25	10	20	54	10	22	05	American.....	Amer-Hawaiian Line.....	407.7	53.7	24.0	Boston, Mass.....	Tacoma, Wash.....	2,734	7,105	4,991
San Clemente.....	10	11	30	11	3	12	11	11	40	11	16	00	American.....	States S. S. Co.....	410.0	54.0	17.8	Tacoma, Wash.....	Tacoma, Wash.....	2,882	6,476	4,982
City of San Francisco.....	9	5	45	11	4	50	11	12	50	11	14	05	American.....	Panama Mail S. S. Co.....	296.0	45.0	17.8	Buenaventura, Col.....	Buenaventura, Col.....	878	3,848	2,606
Wilpoco.....	10	15	10	11	5	00	11	13	25	11	14	00	American.....	Williams S. S. Line.....	386.2	52.2	16.3	Seattle, Wash.....	Seattle, Wash.....	1,327	3,089	7,362
Tongarro.....	10	16	25	11	6	05	11	14	12	11	15	15	British.....	N. Z. Shipping Co.....	400.3	63.7	26.6	Auckland, N. Z.....	Auckland, N. Z.....	5,041	10,817	7,362
Dongstar.....	10	18	20	11	6	35	11	14	49	11	15	00	British.....	Blue Star Line.....	489.8	64.0	19.6	Newcastle, Eng.....	Vancouver, B. C.....	11,073	8,143	8,143
Lesmar.....	10	19	35	11	7	30	11	16	48	11	17	45	American.....	Calmar S. S. Line.....	409.3	54.2	25.0	Seattle, Wash.....	Seattle, Wash.....	7,200	6,581	4,735
Lake Gorn.....	10	22	15	11	8	40	11	17	37	11	19	15	American.....	Ford Motor Co.....	250.3	43.6	19.7	Portland, Ore.....	Portland, Ore.....	2,316	2,692	1,808
Gertrude.....	11	6	40	11	8	25	11	16	53	11	17	55	American.....	Kellogg S. S. Corp.....	391.9	51.2	17.0	Boston, Mass.....	Los Angeles, Calif.....	5,393	3,719	3,719
Lillian.....	11	4	40	11	9	45	11	18	22	11	19	15	American.....	Luckenbach Line.....	448.9	60.2	21.0	Boston, Mass.....	Tacoma, Wash.....	3,000	9,294	6,865
Texas.....	11	7	15	11	10	30	11	18	52	11	20	00	American.....	The Texas Co.....	416.8	56.0	20.0	Boston, Mass.....	Los Angeles, Calif.....	6,782	4,937	4,937
Florence.....	11	10	40	11	11	20	11	19	15	11	20	50	American.....	Luckenbach Line.....	401.8	59.0	20.0	New Orleans, La.....	Seattle, Wash.....	3,802	6,002	4,021
Foesia.....	11	8	55	11	12	35	11	20	10	11	21	00	Norwegian.....	Anglo-Saxon Pet. Co.....	351.0	52.0	18.4	London, England.....	Los Angeles, Calif.....	8,318	5,771	5,771
Kwanto Maru.....	11	15	00	11	18	40	12	10	10	12	11	04	Japanese.....	Osaka Shosen Kaisha.....	460.0	61.6	21.0	Boston, Mass.....	Hongkong, China.....	3,823	9,407	6,047
Reaper.....	11	16	50	11	19	20	12	9	11	12	10	08	American.....	The Texas Co.....	416.8	56.1	19.0	Wilmington, N. C.....	Los Angeles, Calif.....	6,982	5,771	5,771
Nebroska.....	11	3	00	12	3	10	12	11	02	12	12	25	British.....	Royal Mail S. P. Co.....	450.0	58.0	20.8	Rotterdam, Holland.....	Portland, Ore.....	1,963	8,878	6,588
Doebet.....	12	3	05	12	6	50	12	14	28	12	15	50	American.....	Gulf-Pacific Line.....	386.0	52.2	22.0	Houston, Tex.....	Portland, Ore.....	4,700	5,705	4,167
Efra.....	12	3	25	12	7	33	12	15	32	12	16	50	American.....	Tampa Intercoast Co.....	415.0	55.0	22.0	New Orleans, La.....	Vancouver, B. C.....	5,874	6,983	5,182
San Jose.....	12	6	40	12	8	30	12	16	19	12	17	15	German.....	Atlantic Tank, Rhederei.....	413.0	56.0	18.0	Rouen, France.....	La Libertad, Pequa.....	6,579	4,574	4,574
Duchessa.....	10	20	55	12	14	00	12	21	25	12	22	15	American.....	United Fruit Co.....	330.0	44.6	18.3	Cristobal, C. Z.....	San Francisco, Cal.....	166	3,675	2,359
D'Aosta.....	12	8	40	12	15	00	12	22	38	12	23	40	Italian.....	Nav. Libera Tristina.....	464.0	57.0	16.2	Trieste, Italy.....	Vancouver, B. C.....	581	8,734	6,144
Nosa Queen.....	12	5	00	13	1	40	13	9	26	13	17	40	American.....	N. O. & S. A. S. Co.....	324.0	46.2	16.3	New Orleans, La.....	Talcahuano, Chile.....	1,197	3,981	2,600
Lindbank.....	13	3	25	13	4	40	13	12	13	13	14	00	British.....	American Oriental Line.....	422.0	57.0	20.6	New Orleans, La.....	Shanghai, China.....	4,472	7,249	5,108
Caldas.....	10	20	15	13	9	55	13	17	43	13	21	15	Colombian.....	National Navigation Co.....	116.0	21.1	9.0	Cristobal, C. Z.....	Buenaventura, Col.....	147	211	124
Aconagua.....	13	3	50	13	10	15	13	17	19	13	18	10	Chilean.....	Cia. Sud. Amer. de Vap.....	422.8	56.2	24.0	New York, N. Y.....	Valparaiso, Chile.....	1,325	7,764	4,705
Larguna.....	13	1	40	13	11	25	13	18	40	13	23	53	British.....	Pacific Steam Nav. Co.....	420.5	54.2	22.1	Iull, England.....	Corral, Chile.....	4,407	7,139	4,640
Helo.....	7	22	35	13	15	10	13	23	47	14	1	25	Norwegian.....	Panama Mail S. S. Co.....	214.0	34.2	9.10	Cristobal, C. Z.....	Acapulco, Salvador.....	1,158	722	722
Tacoma.....	13	10	05	14	1	30	14	9	08	14	10	30	German.....	Hamburg-Amerikanische.....	477.0	63.0	20.3	Hamburg, Germany.....	Portland, Ore.....	2,133	10,277	7,304
Calli.....	11	19	35	14	3	05	14	10	24	14	11	30	German.....	Roland Line.....	216.0	32.0	13.6	Cristobal, C. Z.....	Guayaquil, Ecuador.....	200	1,105	698
Arrun Maru.....	13	21	30	14	4	40	14	12	53	14	14	40	Japanese.....	Osaka Shosen Kaisha.....	415.0	55.0	25.2	New York, N. Y.....	Shanghai, China.....	6,936	7,273	5,294
Tamarca.....	13	16	35	14	6	03	14	13	54	14	15	00	British.....	Shaw, Savill & Albion.....	500.4	61.0	28.0	London, England.....	Auckland, N. Z.....	3,766	13,592	9,383
Grelstone.....	14	8	40	14	8	55	14	16	28	14	17	45	British.....	DuPont & Co.....	379.0	51.0	15.3	Norfolk, Va.....	Tecopilla, Chile.....	5,361	3,489	3,489
Scottish Chief.....	14	9	50	14	10	05	14	17	58	15	2	15	British.....	Anglo-Saxon Pet. Co.....	441.0	57.0	17.6	Rouen, France.....	Los Angeles, Calif.....	7,571	4,840	4,840
Asrolabe.....	14	7	15	14	13	45	14	23	41	14	23	55	French.....	Messageries Maritimes.....	352.0	52.6	26.9	Dunkirk, France.....	Noumea, N. Calid.....	3,434	5,580	3,797
Motor Sailor.....	14	7	15	14	16	31	14	26	48	14	26	41	American.....	U. S. Navy.....	.....	.....	.....	Gatun, C. Z.....	Gatun, C. Z.....	.....	.....	.....
Mary Ann.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	American.....	United Fruit Co.....	.....	.....	.....	Gatun Lake, C. Z.....	Balboa, C. Z.....	.....	.....	.....

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ionic.....	8	11	05	8	11	53	8	20	00	8	23	48	British.....	Shaw, Savill & Albion.....	500.3	63.3	26.3	Wellington, N. Z.....	London, England.....	2,900	12,872	9,577
San Vincente.....	8	11	05	8	12	10	8	20	30	8	22	55	American.....	Quaker Line.....	410.5	54.3	25.0	Portland, Ore.....	Wilmington, Del.....	6,670	6,572	4,900
West Ira.....	8	13	00	8	13	45	8	21	50	8	21	50	American.....	McCormick S. S. Co.....	410.5	54.2	25.0	Seattle, Wash.....	Buenos Aires, Arg.....	5,527	6,753	5,011

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
City of San Francisco ^s	8	9 55	8	19 26	9	5 45	11	4 50	American	Panama Mail S. S. Co.	296.1	45.9	17.5	San Francisco, Cal.	Cristobal, C. Z.	(*)	1,451	3,848	2,606	
Willapo	8	18 50	8	19 54	9	6 55	9	6 55	American	Amer-Hawaiian Line.	415.0	55.7	27.0	Seattle, Wash.	Baltimore, Md.	General	9,203	7,731	5,805	
Hanley	8	20 50	9	6 49	9	15 05	9	15 05	American	Hanley S. S. Co.	440.0	56.0	27.0	Everett, Wash.	Baltimore, Md.	Lumber	9,545	8,310	6,005	
Fresno Star	9	6 00	9	7 35	9	20 35	9	23 10	British	Blue Star Line, Ltd.	449.5	58.2	24.0	N. Westminster, B. C.	Newcastle, Eng.	Frozen, general.	5,056	8,336	5,404	
Floren	9	14 10	9	15 02	9	23 15	9	23 15	American	Calmar Line, Inc.	410.0	54.2	25.0	Seattle, Wash.	Baltimore, Md.	Lumber	7,363	6,604	4,655	
Sealand ^s	9	8 50	9	16 04	10	18 45	10	18 45	Swedish	Ore S. S. Corp.	561.1	72.2	34.0	Cruz Grande, Chile	Sparrows Pt., Md.	Iron ore.	21,160	15,424	4,421	
Herman F.	9	17 50	9	18 43	10	4 25	10	5 40	American	A. C. Dutton Lumber Co.	409.8	54.2	24.0	Tacoma, Wash.	Poughkeepsie, N. Y.	Lumber	7,240	6,581	4,784	
Whiton ^s	9	19 20	10	6 02	10	20 30	11	5 00	Norwegian	Anglo-Saxon Pst. Co.	460.5	59.5	24.0	Los Angeles, Calif.	Lands End, Eng.	Gasoline	9,740	8,297	5,572	
Nore ^s	9	16 50	10	6 29	10	20 55	10	20 55	American	United Fruit Co.	330.0	44.1	19.0	San Francisco, Cal.	Cristobal, C. Z.	(*)	954	3,675	2,359	
San Jose	9	20 35	10	6 32	10	20 15	10	20 15	Colombian	National Navigation Co.	116.0	21.6	10.2	Buenaventura, Col.	Cristobal, C. Z.	Coffee, general.	189	211	124	
Caldas ^s	10	2 00	10	7 30	10	18 05	11	3 50	German	Hamburg-American Line	499.6	62.1	28.0	Vancouver, B. C.	Hamburg Germany	General	7,906	10,267	7,252	
Vancouver	10	4 56	10	8 24	10	21 35	10	21 45	American	Amer-Hawaiian Line	420.0	54.0	26.0	Portland, Ore.	Boston, Mass.	General	5,661	6,760	4,450	
Columbian	10	6 40	10	9 27	10	22 50	11	11 50	British	Pacific Steam Nav. Co.	480.0	58.2	25.0	N. Westminster, B. C.	Hamburg Germany	General	5,876	8,856	6,559	
Naranta	10	19 15	10	9 55	11	00 15	11	6 40	American	Standard Oil Co., N. Y.	450.5	66.0	29.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	13,067	9,820	6,750	
Comet ^s	10	6 30	10	10 41	11	2 35	11	8 15	Norwegian	Knut Knutsen.	375.8	51.4	24.0	Supe, Peru.	English Channel ⁹	General	6,136	5,681	3,925	
Geisha ^s	10	8 30	10	11 54	11	3 25	11	3 25	British	Furness-Pacific Line.	450.4	60.8	28.0	Vancouver, B. C.	Glasgow, Scotland.	General	8,815	10,086	7,226	
Pacific	10	2 24	10	14 51	10	23 30	11	14 05	American	U. S. Army	448.0	56.0	27.0	Honolulu, T. H.	New York, N. Y.	General	108 ⁸	6,245	6,809	4,842
Chateau	10	18 40	10	19 41	11	5 40	11	12 00	British	Donaldson Bros., Ltd	415.6	54.3	24.0	Vancouver, B. C.	Glasgow, Scotland	General	8,859	8,278	5,839	
Gracia	10	18 25	11	6 30	11	17 00	11	17 00	American	Roosevelt S. S. Co.	456.1	56.0	25.0	Dayao, P. I.	New York, N. Y.	General	7,698	7,816	5,755	
Triumph ^s	10	22 30	11	6 42	11	17 55	11	23 30	German	North German Lloyd	469.8	58.2	27.0	Vancouver, B. C.	Bremen, Germany	General	7,698	7,816	5,755	
Witel.	10	22 30	11	6 42	11	17 55	11	23 30	German	North German Lloyd	469.8	58.2	27.0	Vancouver, B. C.	Bremen, Germany	General	7,698	7,816	5,755	
Horace	11	4 15	11	7 20	11	18 45	11	18 45	American	Luckenbach Line.	445.0	58.0	26.0	Portland, Ore.	Boston, Mass.	General	7,293	8,699	6,363	
Cal.	11	9 55	11	10 48	11	19 35	11	19 35	German	Roland Line.	216.5	32.9	12.4	Guayaquil, Equad ^r	Cristobal, C. Z.	General	355	1,105	698	
Tuscaloosa City	11	15 00	11	15 48	11	23 30	11	23 30	American	Ishman S. S. Lines	442.0	56.0	25.0	Seattle, Wash.	Baltimore, Md.	(*)	7,040	7,611	5,450	
Salvador	11	15 30	11	18 34	12	1 40	12	1 40	British	Pacific Steam Nav. Co.	215.0	33.5	14.0	Champertico, Guat.	Cristobal, C. Z.	(*)	369	1,270	735	
Columbia	11	13 55	12	6 16	12	14 45	13	11 54	American	Panama Mail S. S. Co.	380.0	48.7	24.0	San Francisco, Cal.	New York, N. Y.	General	2,564	6,015	4,281	
Anasia	12	5 00	12	6 44	12	14 45	13	12 33	German	Hamburg-American Line	421.0	55.3	26.0	Valparaiso, Chile.	Hamburg Germany	(*)	7,484	7,286	5,174	
Tolton ^s	12	5 00	12	7 30	12	15 20	12	15 20	Chilean	South American S. S. Co	421.0	56.0	26.0	Valparaiso, Chile.	New York, N. Y.	Nitrates	8,301	7,384	5,459	
David	12	6 45	12	8 53	12	20 05	12	20 05	American	Tidewater Oil Co.	480.0	59.2	25.0	Pt. San Luis, Calif.	New York, N. Y.	Gasoline	8,302	7,629	5,325	
McKety ¹	12	5 30	12	9 14	12	19 00	12	21 20	Norwegian	H. Kuhnle.	407.7	50.8	24.0	Noumea, N. Calid	Baltimore, Md.	Chrome ore.	6,594	6,594	4,769	
Norne ^s	12	10 20	12	11 08	12	20 40	12	20 40	Japanese	Osaka Shosen Kaisha.	350.2	50.8	19.0	Keelung, Japan.	New York, N. Y.	General	2,338	6,538	4,769	
Havana Maru.	12	10 20	12	11 08	12	20 40	12	20 40	Japanese	Osaka Shosen Kaisha.	350.2	50.8	19.0	Keelung, Japan.	New York, N. Y.	General	2,338	6,538	4,769	
Vancouver	12	12 25	12	13 20	12	21 40	12	21 40	British	Reardon Smith Line.	415.6	55.0	25.0	Vancouver, B. C.	Manchester, Eng.	General	7,376	7,272	5,494	
City ^s	12	12 25	12	13 20	12	21 40	12	21 40	British	Reardon Smith Line.	415.6	55.0	25.0	Vancouver, B. C.	Manchester, Eng.	General	7,376	7,272	5,494	

¹ Tanker. ² Motor ship. ³ For orders. ⁴ Coffee, logs, hides, and gasoline. ⁵ Gasoline, kerosene, coffee, and general. ⁶ Beans, flour, hay, canned goods, pulp, and lumber. ⁷ Coffee, specie, and hides. ⁸ Nitrates, copper, and general. ⁹ English Channel.

Japan Arrow ¹	12 13.05	12 14.06	12 22.45	12 22.45	American	Standard Transp. Co.	468.3	62.7	28.0	Los Angeles, Calif.	Providence, R. I.	Gasoline
Musician	12 18.30	13 6.10	13 21.30	13 21.30	British	T. & J. Harrison	384.3	52.0	22.0	N. Westmer, B. C.	Liverpool, England	6,213 5,212
Zealandic ²	12 1.22	13 7.15	13 18.20	13 18.20	British	Ships, Savill & Albion	482.0	64.0	25.0	Bluff, N. Z.	London, England	6,676 11,819
Tusitla ³	12 22.00	13 7.50			American	Ship Yustala, Inc.	261.0	39.0	21.3	Honolulu, T. H.	New York, N. Y.	2,380 1,802
Edgar F.												Raw sugar
Luckenbach	13 14.10	13 14.49	13 22.05	13 22.05	American	Luckenbach Line	425.0	57.3	29.0	Portland, Ore.	Mobile, Ala.	7,517 8,508
Munmysic	13 15.45	13 16.52	14 00.05	14 00.05	American	Munson, McCork Line	400.7	54.2	23.0	Tacoma, Wash.	Baltimore, Md.	7,205 6,623
Dakota	13 16.20	13 17.09	14 2.45	14 2.45	American	Amer-Hawaiian Line	407.7	53.7	27.0	Seattle, Wash.	Boston, Mass.	7,458 7,156
Oropesa	14 1.07	14 8.19	14 16.00	14 20.05	British	Pacific Steam Nav. Co.	530.0	66.0	28.0	Coronel, Chile	Liverpool, England	7,966 14,827
Canadian												General
Planter	14 11.00	14 10.43	13 19.05	14 22.28	British	Can. Nat. Steamships	400.0	52.4	22.4	Vancouver, B. C.	Halifax, N. S.	5,432 5,858
Abron	14 11.40	14 11.56	14 19.40	14 19.40	American	Swayne & Hoyt	386.8	52.2	17.0	Portland, Ore.	Mobile, Ala.	2,994 2,732
Apsley Hall	14 13.00	14 13.45	14 21.20	14 21.20	British	Inter-Freighting Corp.	405.1	52.6	25.0	Antofagasta, Chile	Nitrates	7,900 5,871
Teal ⁴	14 16.28	14 23.15			American	U. S. Navy				Balboa, C. Z.	Cristobal, C. Z.	Ballast

¹ Tanker. ² Sail boat. ³ Tug. All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Date.	Vessel.	ARRIVALS.			DEPARTURES.		
		From—	Date.	Vessel.	Line.	For—	
March 8	Pastores	United Fruit Co.	March 8	No. 9685 ¹⁸	Pan American Airways	Son Salvador and wayp'ts.	
March 8	Inapaquina ¹⁷	A. Tagarapulos	March 8	No. 144-M ¹⁸	Pan American-Grace Airways	Talaba via wayp'ts.	
March 9	Statendam	Holland-America Line	March 8	No. 669-M ¹⁸	Pan American Airways	Miami via wayp'ts.	
March 9	Darien C-35 ¹⁸	Scandia Airplane Co.	March 8	Pastores	United Fruit Co.	New York via Habana.	
March 10	Pullox	Anglo-Saxon Petroleum Co.	March 8	Cartago	United Fruit Co.	New Orleans and wayp'ts.	
March 10	No. 9685 ¹⁸	Hamburg-American Line	March 8	Colombia	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	
March 10	No. 144-M ¹⁸	Pan American Airways	March 10	Statendam	Holland-America Line	New York via wayp'ts.	
March 11	Cristobal	Panama R. R. S. S. Line	March 11	No. 9684 ¹⁸	Pan American Airways	Son Salvador and wayp'ts.	
March 11	Ulua	Elders & Fyffes Line	March 11	Galea	Hamburg-American Line	Tampico via wayp'ts.	
March 11	Reliance	United Fruit Co.	March 11	Carare	United Fruit Co.	Arounouth via wayp'ts.	
March 11	Reliance	Hamburg-American Line	March 12	Tela	Pan American Airways	Boaca, Rep. of Panama.	
March 11	No. 300-N ¹⁶	Pan American-Grace Airways	March 12	No. 145-M ¹⁸	United Fruit Co.	Curacao via wayp'ts.	
March 11	No. 668-M ¹⁶	Leyland S. S. Line	March 12	Pullox	Anglo-Saxon Petroleum Co.	Aruba, D. W. I.	
March 11	No. 9688 ¹⁶	Pan American Airways	March 12	Sxaola	United Fruit Co.	New York via wayp'ts.	
March 11	Pearl Marie ¹⁹	G. I. Bryan	March 12	Davisan	Leyland S. S. Line	Port Limon, Costa Rica.	
March 12	C. C. Acme ²⁰	J. Foster	March 12	Ulua	United Fruit Co.	Bluefields, Nicaragua.	
March 12	Austvangen	Aluminium Line	March 12	Pearl Marie ¹⁹	Reliance	New York via wayp'ts.	
March 12	Martinique	Colombian S. S. Line	March 13	Darien C-35 ¹⁸	Scandia Airplane Co.	Barraquilla and wayp'ts.	
March 13	Esfuerto ¹⁹	Standard Fruit & S. S. Co.	March 13	Martinique	Aluminium Line	Curacao and wayp'ts.	
March 13	Colombia	Royal Netherlands S. S. Co.	March 14	Ametta I ¹⁷	Colombian S. S. Line	New York via Kingston.	
March 14	Republc	United Fruit Co.	March 14	Carmedita ¹⁹	A. Tagarapulos	Colon, Rep. of Panama.	
		United States Lines	March 14	Tela	Standard Fruit & S. S. Co.	San Andres, Colombia.	
			March 14	Cefalu	United Fruit Co.	New Orleans and wayp'ts.	

¹⁷ Motor boat. ¹⁸ Air mail carrier. ¹⁹ Motor schooner. ²⁰ Schooner. * Other than ships passing through the Canal.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.			* DEPARTURES.		
Date.	Vessel.	From—	Date.	Vessel.	For—
March 14.	No. 145-M ²¹ .	Curacao, D. W. I.			
March 14.	No. 670-M ²¹ .	Miami via wayports.			
March 14.	No. 9664 ²¹ .	Pan American Airways			
March 14.	No. 300-N ²¹ .	Pan American Airways			
March 14.	Heredia.	Talara via wayports.			
March 14.	Carmelita ²² .	New Orleans via Habana.			
March 14.	Annexta I. ²³ .	Colon, Rep. of Panama.			
March 14.		A. Tagaropoulos.			

PORT OF BALBOA.

* ARRIVALS.			* DEPARTURES.		
Date.	Vessel.	From—	Date.	Vessel.	For—
March 8.	Nora ¹ .	Los Angeles, Calif.	March 10.	Nora ¹ .	Los Angeles, Calif.
March 9.	Real ²⁴ .	Panama Bay, R. P.	March 10.	Real ²⁴ .	Panama Bay, R. P.
March 10.	Supreme ²⁵ .	Panama Bay, R. P.	March 10.	Supreme ²⁵ .	Panama Bay, R. P.
March 11.	Ranagua ¹ .	Panama Bay, R. P.	March 11.	Ranagua ¹ .	Panama Bay, R. P.
March 11.	La Placencia ¹ .	Valparaiso, Chile.	March 13.	La Placencia ¹ .	San Diego, Calif.
March 11.	City of San Francisco ²⁵ .	Los Angeles, Calif.	March 13.	City of San Francisco ²⁵ .	Los Angeles, Calif.
March 14.		Buenaventura, Colombia.	March 15.		San Francisco, Calif.

¹ Tanker. ²⁴ Motor schooner. ²⁵ Motor ship.

* Other than ships passing through the Canal.

Commercial Traffic Through the Panama Canal in February, 1931, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of February, 1931, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for February, 1930 and 1929. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States	63	352,531	266,032	430,539	265,614	\$303,564.87	158,670
Europe to Canada:							
British	11	64,188	43,036	70,469	43,341	49,271.97	14,176
Danish	1	5,663	5,188	6,913	5,218	6,485.00	7,855
Dutch	1	8,266	6,197	10,220	6,385	7,746.25	3,435
French	3	19,091	10,946	21,869	11,974	13,682.50	3,966
German	2	13,409	8,864	14,905	8,992	11,080.00	6,965
Italian	1	5,962	4,354	7,061	4,460	5,442.50	1,033
Norwegian	2	11,527	8,126	13,074	8,213	10,157.50	9,338
Swedish	2	10,404	6,296	10,318	7,911	7,870.00	6,876
Total	23	138,510	93,007	154,829	96,494	111,735.72	53,694
United States to South America:							
British	2	9,459	7,880	13,882	7,702	7,413.17	1,626
Chilean	2	9,202	7,304	13,615	8,078	9,130.00	1,553
Danish	1	4,936	2,801	4,617	2,782	3,501.25	2,701
Japanese	1	4,409	4,364	5,860	4,260	3,273.00	.....
Norwegian	1	4,513	3,530	5,659	3,533	4,412.50	3,500
Swedish	1	4,421	3,743	15,339	4,377	3,183.12	.....
United States	12	44,868	35,470	64,873	35,431	36,180.74	9,217
Total	20	81,808	65,092	123,845	66,163	67,093.78	18,602
United States to Far East:							
British	5	28,307	18,094	30,899	18,201	22,617.50	22,079
Japanese	6	32,234	26,680	41,073	26,259	33,350.00	27,327
Norwegian	2	8,770	4,954	8,565	4,941	6,192.50	8,550
Panamanian	1	6,955	3,659	6,856	3,659	4,573.75	2,187
United States	3	16,805	11,764	18,979	11,748	14,705.00	21,306
Total	17	93,071	65,151	106,372	64,808	81,438.75	81,449
Europe to South America:							
British	5	31,527	24,566	42,421	25,800	30,605.47	8,425
Danish	2	9,296	5,649	9,527	5,748	7,061.25	6,163
French	1	4,854	3,224	5,399	3,225	4,030.00	1,101
German	4	21,581	15,654	24,488	14,855	19,567.50	8,040
Italian	1	9,329	5,176	11,718	6,750	6,470.00	2,286
Norwegian	1	4,321	3,748	6,361	3,769	3,111.12	.....
Total	14	80,908	58,017	99,914	60,177	70,845.34	26,015
Europe to Australasia:							
British	10	62,930	43,351	72,163	44,755	52,952.12	42,595
Swedish	1	6,190	3,278	5,841	4,083	4,097.50	2,205
Total	11	69,120	46,629	78,004	48,838	57,049.62	44,800
Europe to United States:							
British	2	9,230	7,691	12,694	7,546	6,645.60	.....
Dutch	1	6,210	5,298	8,156	4,898	4,471.20	.....
French	1	5,050	4,356	7,011	3,989	3,636.00	.....
Italian	1	4,421	3,764	6,107	3,883	3,183.12	.....
Norwegian	3	13,917	10,997	18,157	10,956	10,186.72	4,195
United States	2	13,353	10,971	17,633	10,897	11,136.93	8,327
Total	10	52,181	43,077	69,758	42,169	39,259.57	12,522
Foreign vessels in ballast—							
United States intercoastal:							
British	1	5,513	4,783	9,069	4,430	3,969.36	.....
Danish	2	9,815	5,449	9,220	5,603	6,811.25	.....
Japanese	1	5,979	5,121	8,151	3,037	4,304.88	.....
Norwegian	2	8,059	4,932	8,079	4,933	5,677.37	.....
Swedish	2	8,954	5,329	9,170	6,642	6,446.88	.....
Total	8	38,320	25,614	43,689	24,645	27,209.74	.....

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Cristobal to United States:							
British.....	1	4,543	3,999	6,499	4,052	\$3,270.96	.....
United States.....	7	14,852	11,525	19,330	11,425	10,851.50	1,252
Total.....	8	19,395	15,524	25,829	15,477	14,122.46	1,252
Cristobal to South America:							
Colombian.....	3	446	437	673	441	527.65	473
Dutch.....	1	742	294	780	325	367.50	27
German.....	4	3,491	2,260	4,347	2,334	2,825.00	441
Total.....	8	4,679	2,991	5,800	3,100	3,720.15	941
United States to Australasia:							
British.....	4	25,945	17,492	27,964	17,531	21,865.00	8,607
Norwegian.....	2	13,104	7,534	13,341	7,701	9,417.50	3,113
Total.....	6	39,049	25,026	41,305	25,232	31,282.50	11,720
United States to Canada:							
Norwegian.....	2	8,492	4,925	8,340	4,962	6,156.25	6,346
Swedish.....	1	5,199	4,148	6,864	4,997	3,743.28	.....
United States.....	2	10,689	7,307	11,844	7,251	9,133.75	11,984
Total.....	5	24,380	16,380	27,048	17,210	19,033.28	18,330
United States to Philippine Islands:							
Danish.....	1	5,523	3,091	5,086	3,168	3,863.75	4,400
United States.....	1	5,747	5,331	6,901	5,322	6,663.75	5,038
Total.....	2	11,270	8,422	11,987	8,490	10,527.50	9,438
Canada to Australasia:							
British.....	2	9,896	7,660	12,548	7,673	9,575.00	4,959
South America to Canada:							
Norwegian.....	1	5,131	2,906	4,884	3,004	3,632.50	3,959
United States.....	1	4,989	3,517	5,550	3,517	4,396.25	3,753
Total.....	2	10,120	6,423	10,434	6,521	8,028.75	7,712
Cristobal to Central America:							
British.....	1	735	648	1,128	650	810.00	532
Norwegian.....	1	722	651	990	569	519.84	.....
Total.....	2	1,457	1,299	2,118	1,219	1,329.84	532
Around the world:							
United States.....	2	18,461	12,538	20,997	12,538	15,672.50	7,985
United States to Hawaii:							
British.....	1	6,379	5,290	8,940	5,229	4,592.88	.....
United States to Balboa:							
United States.....	1	332	320	662	320	240.00	.....
Central America to Balboa:							
United States.....	1	966	707	1,309	691	695.52	.....
Central America to South America:							
Colombian.....	1	124	113	207	109	141.25	249
South America to Far East:							
Japanese.....	1	5,821	4,170	7,267	4,387	5,212.50	3,476
Europe to Central America:							
Danish.....	1	3,531	2,384	3,953	2,394	2,980.00	2,300
West Indies to United States:							
United States.....	1	6,050	5,140	8,207	5,092	4,356.00	.....
West Indies to Canada:							
Norwegian.....	1	4,134	3,214	5,242	3,264	4,017.50	480
West Indies to Balboa:							
British.....	1	.....	.....	.....	.....	18,320.00	.....
Grand total, February, 1931..	212	1,072,493	780,220	1,300,803	787,854	912,045.02	465,126
Grand total, February, 1930..	257	1,258,677	938,452	1,561,155	945,123	1,083,993.81	795,413
Grand total, February, 1929..	277	1,293,704	987,172	1,629,408	994,588	1,119,089.89	864,344

* Naval vessel of 36,640 displacement tons.

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	67	358,777	276,804	445,065	276,328	\$345,666.03	500,764
Canada to Europe:							
Belgian.....	1	5,595	3,693	5,852	3,613	4,616.25	8,217

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Canada to Europe—Continued:							
British.....	20	99,568	69,543	112,550	69,747	\$86,928.75	143,070
Danish.....	2	13,924	10,406	16,109	10,491	13,007.50	22,167
Dutch.....	3	21,230	16,418	26,388	16,418	20,522.50	27,386
French.....	2	11,956	7,106	13,518	7,535	8,882.50	14,215
German.....	4	24,191	15,113	25,660	15,661	18,891.25	29,496
Italian.....	2	15,853	12,299	20,008	12,480	15,373.75	18,759
Norwegian.....	1	6,140	5,261	8,513	5,339	6,576.25	7,483
Swedish.....	2	10,521	6,187	10,602	7,985	7,733.75	12,693
United States.....	1	5,188	3,856	6,194	3,845	4,820.00	8,022
Total.....	38	214,166	149,882	245,385	153,114	187,352.50	291,508
South America to United States:							
British.....	8	37,818	29,789	50,456	30,842	37,236.25	74,047
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	4,084
Danish.....	2	9,325	5,456	9,025	5,491	6,820.00	15,960
Japanese.....	1	4,409	4,364	5,860	4,260	5,290.80	7,958
Norwegian.....	2	7,981	5,328	8,910	5,429	6,660.00	14,063
Swedish.....	2	8,917	7,486	30,676	8,762	9,357.50	43,796
United States.....	11	46,396	36,485	65,835	36,461	45,093.15	93,887
Total.....	27	119,551	92,374	178,072	95,221	114,790.20	253,795
South America to Europe:							
British.....	3	16,417	12,764	20,688	12,923	15,955.00	19,197
Dutch.....	1	5,806	3,602	5,789	3,289	4,502.50	7,046
French.....	2	9,316	8,534	12,544	8,525	10,534.55	14,896
German.....	5	24,968	17,023	28,424	16,607	21,278.75	37,540
Italian.....	1	7,516	5,514	12,003	6,058	6,892.50	1,436
Norwegian.....	1	3,930	3,137	5,128	3,129	3,921.25	6,037
Swedish.....	2	7,427	5,884	10,374	7,448	7,355.00	14,340
Total.....	15	75,380	56,458	94,950	57,979	70,439.55	100,492
United States to Europe:							
Belgian.....	1	4,976	4,568	7,138	3,988	5,710.00	9,200
British.....	5	23,490	18,576	30,012	18,741	23,220.00	33,787
Danish.....	1	5,317	4,219	6,645	4,244	5,273.75	9,056
German.....	1	6,656	4,840	7,915	4,883	6,050.00	9,163
Norwegian.....	5	22,959	16,055	26,746	15,785	20,068.75	37,987
United States.....	1	6,020	4,821	7,583	4,826	6,026.25	10,035
Total.....	14	69,418	53,079	86,039	52,467	66,348.75	109,228
Philippine Islands to United States:							
Danish.....	2	6,663	4,219	7,119	4,280	5,273.75	11,650
Japanese.....	4	20,144	17,876	25,412	17,791	22,188.90	31,265
Norwegian.....	1	4,538	2,477	4,116	2,454	3,096.25	7,000
Panamanian.....	1	6,967	3,622	6,801	3,622	4,512.50	6,109
United States.....	2	9,824	8,327	10,921	7,316	10,291.85	15,428
Total.....	10	48,136	36,521	54,369	35,463	45,363.25	71,452
South America to Cristobal:							
Colombian.....	4	570	550	880	550	668.90	916
Dutch.....	2	1,484	588	1,560	646	735.00	556
German.....	4	3,491	2,260	4,347	2,334	2,825.00	1,640
Total.....	10	5,545	3,398	6,787	3,530	4,228.90	3,112
Australasia to Europe:							
British.....	8	68,225	48,374	79,516	49,776	60,467.50	50,409
United States to Cristobal:							
British.....	1	4,543	3,999	6,499	4,052	4,998.75	8,723
United States.....	6	13,303	10,358	17,356	10,263	12,947.50	7,046
Total.....	7	17,846	14,357	23,855	14,315	17,946.25	15,769
Central America to Cristobal:							
British.....	3	3,028	2,568	4,831	2,715	3,210.00	1,086
Norwegian.....	1	722	579	990	569	723.75	939
United States.....	1	1,549	1,167	1,974	1,161	1,458.75	1,549
Total.....	5	5,299	4,314	7,795	4,445	5,392.50	3,574
Far East to United States:							
Japanese.....	3	18,905	14,824	23,971	14,567	18,530.00	15,051
Canada to United States:							
Danish.....	1	4,467	2,690	4,473	2,737	3,362.50	7,200
Norwegian.....	2	9,968	5,403	9,065	5,417	6,753.75	14,407
Total.....	3	14,435	8,093	13,538	8,154	10,116.25	21,607

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Australasia to Canada:							
British	3	13,829	10,959	18,080	11,089	\$13,698.75	4,008
Central America to Europe:							
German	2	4,259	3,058	5,226	3,047	3,822.50	2,970
Canada to South America:							
Norwegian	2	10,506	5,830	9,760	5,993	7,287.50	6,038
United States to India:							
British	1	4,681	2,652	4,351	2,638	3,515.00	2,050
Canadian intercoastal:							
British	1	4,186	3,322	5,465	3,400	4,152.50	6,074
South America to West Indies:							
British	1	4,964	4,136	6,888	4,080	3,574.08	.....
Far East to Europe:							
Norwegian	1	4,265	2,495	4,333	2,494	3,118.75	7,192
Balboa to Cristobal:							
British	1	.....	.....	.....	.....	18,247.00	.....
Grand total, February, 1931..	219	1,062,373	790,930	1,313,445	798,100	1,003,857.76	1,465,093
Grand total, February, 1930..	234	1,110,578	841,971	1,374,438	839,467	1,047,392.31	1,582,487
Grand total, February, 1929..	245	1,134,826	876,251	1,426,912	873,266	1,092,871.31	1,686,154

^a Naval vessel of 36,494 displacement tons.

United States Intercoastal Traffic by Commodities for February, 1931.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for February, 1931, and the totals for February, 1930 and 1929. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Agricultural implements	1,284	.....	1,284
Alfalfa	.....	888	888
Alfalfa meal	.....	696	696
Ammonia	868	.....	868
Asphalt	158	.....	158
Automobiles	2,447	185	2,632
Automobile accessories	620	106	726
Bamboo	.....	126	126
Bark, cascara	.....	14	14
Barley	.....	27	27
Beans	23	8,203	8,226
Borax	.....	824	824
Bricks	490	.....	490
Burlap	174	32	206
Calcium carbide	264	30	294
Canned:			
Fish	590	7,036	7,626
Fruit	1,500	29,845	31,345
Meat	58	28	86
Milk	52	322	374
Soup	2,193	40	2,233
Vegetables	179	5,647	5,826
Miscellaneous and unclassified	1,662	7,943	9,605
Carbon black	13	75	88
Celite filtercel	.....	170	170
Cement	334	.....	334
Chalk	400	.....	400
Charcoal	141	.....	141
Chemicals	2,159	611	2,770
China and fire clay	173	20	193
Coal	2,073	.....	2,073
Cocoa	133	.....	133

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Coconuts.....	19	194	213
Coffee.....	167	65	232
Coke.....	184		184
Cold storage:			
Cheese.....	132		132
Eggs.....		37	37
Lard.....	86		86
Meat.....	40		40
Other.....	350	271	621
Confectionery.....	904	15	919
Cork.....	76		76
Cotton.....	557	2,183	2,740
Cyanide.....	82		82
Drugs and medicines.....	1,755	70	1,825
Dyes.....	17		17
Dyewoods.....	2		2
Earthenware.....	212	100	312
Explosives.....	76		76
Fertilizer.....	39	99	138
Flour.....	119	6,811	6,930
Fruit:			
Dried.....		8,446	8,446
Fresh.....	79	1,244	1,323
Furniture.....	291	9	300
General.....	31,385	8,090	39,475
Glass and glassware.....	1,669	234	1,903
Glue.....	68	223	291
Granite.....	56		56
Hair.....	12	25	37
Hardwoods.....	757	137	894
Hay.....		1,008	1,008
Hemp.....		392	392
Honey.....		180	180
Hops.....		51	51
Infusorial earth.....		199	199
Ink.....	15		15
Jute.....	84	201	285
Kapok.....		11	11
Lard substitute.....	1,302		1,302
Leather.....	5		5
Lime.....	50		50
Linoleum.....	276	76	352
Liquors.....	101	131	232
Lumber.....	1,568	161,258	162,826
Malt.....	257	28	285
Manufactured goods:			
Iron and steel.....	58,159	771	58,930
Machinery.....	2,254	446	2,700
Railroad material.....	176		176
Tinplate.....	6,806		6,806
Textiles.....	3,256	262	3,498
Miscellaneous.....	9,256	2,342	11,598
Marble.....	26		26
Matches.....	185	25	210
Metals:			
Antimony.....		123	123
Copper.....		2,343	2,343
Iron.....	1,203		1,203
Lead.....	113	897	1,010
Scrap.....	180	80	260
Tin.....		531	531
Zinc.....	13	500	513
Other.....	579		579
Milk, powdered.....	20	564	584
Molasses.....	533		533
Musical instruments.....	45		45
Nitrates.....	105		105
Nuts.....		252	252
Oats.....	83		83
Oils:			
Cottonseed.....	146		146
Gas oil, fuel oil.....	15	38,381	38,396
Gasoline, benzine, naphtha.....	105	153,375	153,480
Kerosene.....		5,845	5,845
Linseed.....	48		48
Lubricating and greases.....	4,112	1,805	5,917
Olive.....	15		15
Vegetable.....	270	52	322
Wood.....	74	21	95
Ores:			
Copper.....		765	765
Magnesite.....	100	50	150
Other.....		100	100
Paint.....	416	348	764
Paper.....	5,877	7,133	13,010

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Paper pulp.....		5,843	5,843
Paper roofing.....	98		98
Peanuts.....	430	771	1,201
Phosphates.....	2,694		2,694
Poreclain.....	142	87	229
Rags.....		107	107
Rice.....	1,494	586	2,080
Rope.....	167	81	248
Rosin.....	685		685
Rubber:			
Manufactured.....	840	225	1,065
Raw.....	42		42
Scrap.....		45	45
Salt.....	285		285
Seeds:			
Grass.....		361	361
Other.....	73	619	692
Shells.....	2,195		2,195
Silk.....		2,316	2,316
Skins and hides.....		2,452	2,452
Slate.....	380		380
Soap.....	2,983	262	3,245
Soda.....	596		596
Soda ash.....	1,082	20	1,102
Soda, bicarbonate.....	172		172
Soda, caustic.....	74		74
Starch.....	86		86
Sugar.....	75	4,167	4,242
Sulphur.....	60	125	185
Syrup.....	188		188
Talc.....		125	125
Tallow.....		11	11
Tar.....	117		339
Tea.....		25	25
Tobacco.....	1,023	132	1,155
Turpentine.....	38		38
Vegetables.....	49	37	86
Waste.....	26	65	91
Wax.....	33		33
Wheat.....		520	520
Wine.....		195	195
Wool.....	120	1,376	1,496
Zinc oxide.....	52		52
Total, February, 1931.....	171,229	492,442	663,671
Total, February, 1930.....	239,526	476,970	716,496
Total, February, 1929.....	258,944	539,256	798,200

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 11, 1931.

No. 853.

Panama, Panama Bay, Perlas Islands, spar buoy established. The commanding officer of the U. S. S. *Argonne*, has reported by radio the establishment of a spar buoy as follows:

A spar buoy with black and red horizontal stripes was planted to mark the shoal spot one mile east of Punta de Cocos, Bahia Santelmo, Isla del Rey, in the Perlas Group. The buoy was planted with right tangent Isla Santelmo bearing $43\frac{1}{2}$ degrees true and right tangent Galera Island bearing $107\frac{1}{2}$ degrees true.

H. BURGESS,
Governor.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at $14\frac{1}{2}$ cents per pound and forequarters at 12 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., March 25, 1931. No. 34.

CANAL WORK IN FEBRUARY, 1931.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of February, 1931.

BALBOA HEIGHTS, C. Z., March 17, 1931.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of February, 1931:

NUMBER OF TRANSITS.

During the month, 431 commercial vessels and 2 small nonseagoing launches under 20 tons transited the Canal. In addition to these there were 86 vessels belonging to the United States Government, and 3 transits of vessels solely for repairs, on which no tolls were collected, making a total of 522 transits for the month, or a daily average on all traffic of 18.64. The majority of the United States Government vessels were units of the Scouting Fleet transiting from the Atlantic to the Pacific to participate in the combined fleet maneuvers in and beyond Panama Bay.

Tolls on the 431 commercial vessels amounted to \$1,915,902.78, and on the launches to \$13.08, or a total of \$1,915,915.86, or a daily average on all traffic of \$68,425.57.

In comparison with February, 1930, traffic for the past month declined 12.2 per cent in the number of transits and 10.1 per cent in tolls. In comparison with January, 1931, a decrease of 9.5 per cent in transits and 9.1 per cent in tolls occurred, although the daily average of 15.39 commercial transits and \$68,425.10 in tolls, was slightly higher than in January. In comparison with the first 8 months of the fiscal year 1930, the corresponding period this year has had 415 fewer transits and \$1,398,419.21 less tolls, decreases of 9.8 per cent and 7.6 per cent, respectively.

The total number of craft of all kinds transiting the Canal during the month of February in the two preceding years and in 1931 are shown in the following tabulation:

	February, 1929.	February, 1930.	February, 1931.
Commercial vessels.....	522	491	431
Launches (under 20 tons).....	23	3	2
Noncommercial vessels:			
United States Government.....	55	73	86
Panamanian Government.....	2	1	.....
For repairs.....	4	4	3
Total.....	606	572	522

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun.....	7	8	15
Pedro Miguel.....	17	18	35
Miraflores.....	18	20	38

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tons of cargo carried, and tolls collected, from the commercial traffic transiting the

Canal each month from the beginning of the fiscal year 1931 to the end of February, 1931, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929-30	1930-1	1929-30.	1930-1.	1929-30.	1930-1.	1929-30.	1930-1.
July	527	488	2,468,280	2,438,895	2,598,162	2,402,047	\$2,259,582.37	\$2,180,511.82
August . . .	541	465	2,558,730	2,345,573	2,680,730	2,148,466	2,327,437.86	2,080,230.42
September .	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.58
October . . .	564	517	2,747,949	2,584,160	2,845,643	2,394,410	2,485,897.71	2,288,982.08
November . .	525	479	2,498,906	2,371,487	2,534,631	2,263,200	2,244,895.94	2,098,357.36
December . .	522	495	2,548,771	2,473,626	2,524,934	2,166,884	2,309,030.88	2,192,583.85
January . . .	531	476	2,601,628	2,380,871	2,611,632	2,106,937	2,360,211.24	2,108,140.42
February . .	491	431	2,369,255	2,134,866	2,377,900	1,930,219	2,131,386.12	1,915,902.78
Total . . .	4,224	3,809	20,218,789	19,043,902	20,606,415	17,471,748	18,320,231.52	16,921,812.31

* Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these governments, and vessels transiting solely for repairs, do not pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for February in the years 1929, 1930, and 1931, and comparison with the monthly averages for the calendar year 1930:

	February, 1929.	February, 1930.	February, 1931.	Average per month for calendar year 1930.
Number of vessels	522	491	431	490
Panama Canal net tonnage	2,428,530	2,369,255	2,134,866	2,438,406
United States net tonnage	1,863,423	1,780,423	1,571,150	1,826,376
Registered gross tonnage	3,056,320	2,935,593	2,614,248	3,025,071
Registered net tonnage	1,873,854	1,784,590	1,585,954	1,839,006
Tolls	\$2,211,961.20	\$2,131,386.12	\$1,915,902.78	\$2,178,835.41
Tons of cargo carried	2,550,498	2,377,900	1,930,219	2,320,662

The average daily number of transits, tonnage (Panama Canal measurement), tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for calendar year 1930.
	February, 1929.	February, 1930.	February, 1931.	
Number of transits	18.64	17.54	15.39	16.12
Panama Canal net tonnage	86,733	84,616	76,245	80,167
Tolls	\$78,998.62	\$76,120.93	\$63,425.10	\$71,632.95
Tons of cargo carried	91,089	84,925	68,936	72,296

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of February, 1929, 1930, and 1931, are shown in the following tabulation:

	Average per vessel.		
	February, 1929.	February, 1930.	February, 1931.
Panama Canal net tonnage	4,652	4,825	4,953
United States net tonnage	3,570	3,626	3,645
Registered gross tonnage	5,855	5,979	6,066
Registered net tonnage	3,590	3,635	3,680
Tolls	\$4,237.47	\$4,340.91	\$4,445.25
Tons of cargo (including vessels in ballast)	4,886	4,843	4,478
Tons of cargo (laden vessels only)	5,890	5,730	5,347

NATIONALITY OF VESSELS.

Fourteen nationalities were represented in the commercial traffic through the Canal in February, 1931. Vessels of United States registry, with 185, led in the number of transits, while those flying the British flag, with 102, were second. Vessels of these two nationalities made up 66.6 per cent of the total transits for the month. Vessels of Norwegian and German registry were next with 33 and 26 transits, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo through the Canal during the month of February, 1931, aggregating 1,930,219 tons, was the lowest month's cargo tonnage through the Canal since September, 1925, when 1,891,988 tons were passed through. Cargo from the Atlantic to the Pacific totaled 465,126 tons, as compared with 562,832 tons in the previous month, and 795,413 tons in February, 1930. The cargo in this direction for February, 1931, was the lightest since February, 1922, when 442,825 tons were transited. From the Pacific to the Atlantic there were 1,465,093 tons, as compared with 1,544,105 tons in January, 1931, and 1,582,487 tons in February, 1930.

From the Atlantic to the Pacific various manufactured goods, totaling 137,158 tons, constituted the heaviest item of cargo, followed by cotton with 28,056 tons, slag with 25,817 tons, phosphates with 19,382 tons, mineral oils with 18,456 tons, and cement with 17,670 tons. There was a decrease of 330,287 tons, or 41.5 per cent, in cargo moving in this direction as compared with February, 1930, owing to a general decline in shipments of practically all the leading commodities normally routed in this direction.

From the Pacific to the Atlantic mineral oils, as in the past, constituted the leading commodity in February, 1931, totaling 289,936 tons. This was followed by lumber with 224,682 tons, wheat with 200,998 tons, nitrates with 155,554 tons, and ores (principally iron) with 112,003 tons. All these items, with the exception of wheat, declined in comparison with February, 1930, as follows: Mineral oils, 90,383 tons, or 23.8 per cent; lumber, 27,264 tons, or 10.8 per cent; nitrates, 29,055 tons, or 15.7 per cent; and ores, 42,551 tons, or 27.5 per cent. Wheat showed an increase of 27,829 tons, or 16.1 per cent. In aggregate, there was a decrease of 117,394 tons, or 7.4 per cent, in cargo routed in this direction in comparison with the total transiting in February, 1930.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton, nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.907 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.719 per net ton, Panama Canal measurement.

Taking traffic through the Canal for the month of February, 1931, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60¢ ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$10,326.25	\$10,571.00	\$244.75	
British.....	511,372.61	516,069.00	4,687.39	
Chilean.....	13,462.50	13,907.00	444.50	
Colombian.....	13,337.80	1,140.00		197.80
Danish.....	57,378.75	65,238.00	7,859.25	
Dutch.....	45,406.20	50,550.00	5,143.80	
French.....	40,765.55	48,247.00	7,481.45	
German.....	86,340.00	102,046.00	15,706.00	
Italian.....	37,561.87	41,312.60	3,950.73	
Japanese.....	92,150.08	87,745.80		4,404.28
Norwegian.....	117,227.55	136,748.80	19,521.25	
Panamanian.....	9,086.25	13,922.00	4,835.75	
Swedish.....	49,787.03	54,603.40	4,816.37	
United States.....	843,900.34	871,529.20	27,628.86	
Total.....	1,915,902.78	2,013,620.80	102,320.10	4,602.08
Net increase on all traffic.....			97,718.02	

* Includes \$36,567 collected for two transits of a naval vessel.

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$20,814.70
United States foreign trade.....	6,778.96
United States—Canal Zone trade.....	35.20
Total.....	\$27,628.86

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in February, 1931, is shown in the following tabulation, segregated by nationality of vessels and direction of transit; laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....		1.65	1.65
British.....	.54	1.24	.95
Chilean.....	.17	.87	.41
Colombian.....	1.27	1.61	1.44
Danish.....	.88	1.66	1.40
Dutch.....	.53	1.23	.95
French.....	.21	1.37	.76
German.....	.40	1.27	.94
Italian.....	.22	.86	.61
Japanese.....	.81	1.25	1.04
Norwegian.....	.74	1.42	1.14
Panamanian.....	.31	.88	.60
Swedish.....	.55	2.64	1.84
United States.....	.67	1.44	1.10
Averages, February, 1931.....	.60	1.39	1.05
Averages, February, 1930.....	.82	1.44	1.15
Averages February, 1929.....	.96	1.49	1.26

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of February is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	1	4,734	\$4,931.25	28	155,977	\$164,465.80
Ballast.....	30	168,717	121,476.24	1	4,964	3,574.08
General cargo ships:						
Laden.....	144	769,724	674,575.15	188	901,318	817,488.80
Ballast.....	29	126,598	90,777.62			
Noncargo-carrying ships:						
Naval.....	1		18,320.00	1		18,247.00
Yachts.....	7	2,720	1,964.76	1	114	82.08
Total.....	212	1,072,493	912,045.02	219	1,062,373	1,003,857.76
Method of propulsion:						
Steam.....	144	732,523	646,266.09	158	742,849	724,389.28
Motor.....	66	338,983	265,067.66	61	319,524	279,468.48
Motor auxiliary.....	2	987	711.27			
Total.....	212	1,072,493	912,045.02	219	1,062,373	1,003,857.76

Of the 302 steam-driven vessels, 220 were oil burning, 74 coal burning, and 8 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of February, 1931. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Aircraft tenders.....	2	10,189	\$7,641.75	1	4,800	\$3,645.00
Auxiliaries.....	1	2,809	3,511.25			
Battleships.....	2	53,000	26,500.00			
Cruisers.....	13	106,400	53,200.00	1	8,900	4,450.00
Destroyers.....	18	22,923	11,461.50	1	1,154	577.00
Destroyer tenders.....	2	12,000	8,640.00			
Gunboats.....	1	1,425	712.50	1	1,425	712.50
Mine layers.....	1	3,800	1,900.00			
Mine sweepers.....	9	8,550	4,275.00	2	1,900	950.00
Submarines.....	5	5,535	2,767.50	1	876	438.00
Supply ships.....	1	3,394	4,242.50	1	3,394	2,545.50
Repair ships.....	1	3,714	2,785.50			
Tankers.....	4	21,216	26,520.00	4	22,411	16,808.25
Tugs.....	1	969	484.50			
U. S. Army vessels:						
Launches.....	1	10	7.50	1	75	7.50
Mine planters.....	2	2,416	1,208.00	2	2,416	1,208.00
Transports.....	3	11,269	14,086.25			
Tugs.....	2	229	171.75	2	92	69.00
Total, U. S. Government.....	69		170,115.50	17		31,410.75
Vessels for repairs:						
Tankers.....	1	1,035	776.25	2	1,156	867.00
Grand total.....	70		170,891.75	19		32,277.75

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of February, 1931, carried cargo as follows: Atlantic to Pacific, 4,550 tons; Pacific to Atlantic, none; total, 4,550 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement, shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of February, 1931. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	2	18	\$13.08
Pacific to Atlantic.....			
Total.....	2	18	13.08

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of February, 1931, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons	101,418	34,300	135,718
Local cargo shipped..... tons	5,786	951	6,737
Transit cargo arriving..... tons	1,909,019	2,167,342	4,076,361
Transit cargo clearing..... tons	1,906,806	2,149,574	4,056,380
Cargo received for transshipment..... tons	29,970	532	30,502
Cargo transhipped..... tons	29,342	2,328	31,670
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	123	47	170
Number of releases issued.....	601	290	891
Tons received.....	1,552	330	1,882
Tons withdrawn.....	1,517	543	1,860
Packages received.....	6,485	3,508	9,993
Packages withdrawn.....	5,204	3,726	8,930
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	37		37
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons	13,125		13,125
Coal issued, miscellaneous:			
Panama Canal departments..... tons	104	6	110
U. S. Army, including vessels..... tons	52	22	74
Individuals and companies..... tons	119		119
Transferred to Navy..... tons	28		28
Total sales and issues..... tons	12,423	28	13,456

	Cristobal.	Balboa.	Total.
Coal on hand, February 1, 1931..... tons	30,045		30,045
Coal on hand, March 1, 1931..... tons	43,472		43,472
Coal received during month..... tons	26,855		26,855
Coal received from Navy..... tons		28	28
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls.	6,420.18	16,810.50	23,230.68
Panama Railroad Company..... bbls.	1,562.34	331.26	1,943.60
U. S. Army and Navy..... bbls.	1,093.80	123.56	1,217.36
Individuals and companies..... bbls.		188.35	188.35
Total sales and issues..... bbls.	9,076.32	17,503.67	26,579.99
Fuel oil received during February, 1931..... bbls.	72,945.14		72,945.14
Fuel oil on hand, March 1, 1931..... bbls.	82,880.41	63,938.33	146,818.74
Diesel oil borrowed from Union Oil Co..... bbls.	201.50		201.50
Diesel oil issued and sold during February, 1931..... bbls.	201.50	2,581.90	2,783.40
Diesel oil on hand March 1, 1931..... bbls.	1,083.28	36,824.54	37,907.82
Miscellaneous transfers..... bbls.	412.48	624.41	1,036.89
Gasoline and kerosene pumped for The Panama Canal..... bbls.	2,316.76	5,614.65	7,931.41
Gasoline pumped for individuals and companies..... bbls.	684.41	7,691.25	8,375.66
Oil pumped for individuals and companies:			
Receipts..... bbls.	316,969.43	138,102.80	455,072.23
Issues..... bbls.	246,249.01	178,015.39	424,264.40
Oil pumped for U. S. Navy..... bbls.	106,579.36	72,062.00	178,641.36
Total fuel oil, gasoline, and kerosene handled..... bbls.	755,434.41	422,195.07	1,177,630.48
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	15	3	18
Measured for Panama Canal net tonnage.....	2		2
Remeasured for Panama Canal net tonnage.....	14	3	17
Panama Canal net tonnage corrected.....	1	2	3
U. S. equivalent tonnage corrected.....	6	8	14
Services of harbor equipment:			
Tugs, total operating hours.....	387½	268½	656½
Launches, total operating hours.....	1,355	1,738½	3,093½
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$12,978.75	\$8,843.75	\$21,822.50
Pilotage.....	20,225.00	7,964.00	28,189.00
Scamen.....	9,752.00	10,048.00	19,800.00
Launch service.....	1,895.50	3,091.00	4,986.50
Wharfage.....	16,815.84	5,365.97	22,181.81
Ships measured.....	65.00		65.00
Miscellaneous.....	400.10	439.00	839.10
Ships repaired at Panama Canal shops:			
Commercial.....	49	11	51
U. S. Army and Navy.....	6	8	14
Panama Canal equipment.....	4	11	15
Total.....	50	30	80
Vessels dry-docked:			
Commercial.....	4	1	5
U. S. Army and Navy.....	2		2
Panama Canal equipment.....		2	2
Total.....	6	3	9
Clearances issued.....	277	214	491
Bills of health issued.....	288	217	505

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal.	558	3,715,041	2,421,283	575	3,600,396	2,549,189
Vessels entering port but not transiting Canal.	84	661,421	389,297	65	394,157	379,892
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	117	752,893	450,395	98	618,133	375,260
<i>Ships clearing.</i>						
All vessels, including those transiting Canal.	554	3,723,641	2,433,871	452	2,789,693	1,751,887
Vessels clearing port but not transiting Canal.	80	643,000	377,871	6	30,049	18,935
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	113	742,272	444,159	96	609,269	370,662

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports	1,080	1,195	2,275	157	647	804
From Pacific ports	185	127	312	311	185	496
* Total disembarking	1,265	1,322	2,587	468	832	1,300
Embarking:						
For Atlantic ports	943	548	1,491	37	30	67
For Pacific ports	145	117	262	287	250	537
Total embarking	1,088	665	1,753	324	280	604
Remaining on board:						
From Atlantic to Pacific ports	1,887	1,577	3,464	1,900	1,683	3,583
From Pacific to Atlantic ports	948	995	1,943	1,041	782	1,823
From Atlantic to Atlantic ports	7,084	110	7,194			
From Pacific to Pacific ports				5	72	77
Total remaining on board	9,919	2,682	12,601	2,946	2,537	5,483
Total arriving	11,184	4,004	15,188	3,414	3,369	6,783
Total departing	11,007	3,347	14,354	3,270	2,817	6,087

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific	212	53	25.0
Pacific to Atlantic	219	64	29.2
Total	431	117	27.1

In addition to the aforesaid, 71 passenger-carrying vessels called at the port of Cristobal and 4 at Balboa without transiting the Canal, making a total of 192 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of February, 1931, 34 commercial airplanes entered and 33 cleared at Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of February, 1931, together with the total sales in the corresponding month in 1930 and 1929:

	Icc.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels	\$1,900.65	\$10,397.04	\$25,321.20	\$400.41	\$8,342.55	\$46,361.85
Government vessels	332.70	1,462.55	12,216.94	8.17	1,744.81	15,765.17
P. R. R. vessels	8.80	409.91	215.99	578.84	220.47	1,434.01
Total sales, February, 1931	2,242.15	12,269.50	37,754.13	987.42	10,307.83	63,561.03
Total sales, February, 1930	3,106.92	19,328.17	64,483.12	803.28	15,830.02	103,551.51
Total sales, February, 1929	4,331.80	15,291.56	50,881.97	911.76	8,100.71	79,517.80
Sales at Balboa to:						
Commercial vessels	714.15	1,207.95	9,217.55	498.58	8,547.58	20,185.81
Government vessels	2,804.00	9,749.98	52,636.59	1,410.88	29,325.36	95,926.81
Total sales, February, 1931	3,518.15	10,957.93	61,854.14	1,909.46	37,872.94	116,112.62
Total sales, February, 1930	1,164.51	15,337.03	49,719.48	1,087.49	12,166.67	79,475.18
Total sales, February, 1929	8,782.60	26,483.25	73,482.89	559.10	26,160.71	135,468.55

The aggregate sales to Government vessels during the month was \$111,691.98; to Panama Railroad vessels, \$1,434.01; and to other commercial vessels, \$66,547.66; making the total sales to all vessels \$179,673.65. The figures are subject to minor change on final audit.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of February, 1931, as compared with the corresponding month in 1930 and 1929:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. ¹			Feb., 1929.	Feb., 1930.	Feb., 1931.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	207	194	401	11	40	51	503	490	452
Pedro Miguel.....	214	204	418	13	42	55	515	515	473
Miraflores.....	214	199	413	12	41	53	466	500	466
	Number of vessels put through locks.								
Gatun.....	217	212	429	30	82	112	611	596	541
Pedro Miguel.....	219	209	428	40	91	131	674	619	559
Miraflores.....	219	209	428	41	93	134	636	616	562

¹ Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	91	91	91
Panama Canal equipment.....	15	35	38
Launches (under 20 tons).....	3	2	2
Vessels for repairs.....	3	3	3

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in February, 1931, as compared with the preceding month and the corresponding month in 1930:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	1,677,170,000	962,380,000	964,580,000
Maintenance.....	29,570,000		
Leakage.....	50,000,000	20,000,000	20,000,000
Total, February, 1931.....	1,756,740,000	982,380,000	984,580,000
Total, January, 1931.....	1,936,730,000	1,118,770,000	1,178,420,000
Total, February, 1930.....	1,323,760,000	1,043,460,000	1,053,700,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of February, 1931, are shown in comparative form in the following tabulation:

	February.		February—Years of record.		
	1930.	1931.	Maximum.	Minimum.	Mean.
Discharge of Chagres River at Alhajuela.....	<i>C. f. s.</i> 666	<i>C. f. s.</i> 623	<i>C. f. s.</i> 3,315	<i>C. f. s.</i> 516	<i>C. f. s.</i> 1,197
Maximum momentary discharge for the month.....	1,500	852	43,500		
Gatun Lake watershed, total yield.....	936	1,085	5,077	705	1,763
Gatun Lake watershed, net yield.....	40	120	4,207	-287	837
Draft on Gatun Lake for lockages and power.....	2,065	2,064	2,919	1,106	2,064

¹ February 1, 1909.

² 1914 excluded.

³ One unit of Miraflores Diesel-electric power plant in operation February 1st to 16th; two units in operation 17th to 28th.

The monthly mean discharge of the Chagres River at Alhajuela for February, 1931, was 623 c. f. s., which is 48 per cent below the 30-year average of 1,197 c. f. s. The maximum monthly mean discharge on record for February is 3,315 c. f. s. in 1909, and the minimum is 516 c. f. s. in 1912. There were no rises of 5 feet or more during the month. The maximum momentary discharge for the month was 852 c. f. s. at elevation 92.17 feet on the 28th, and the minimum was 502 c. f. s. at elevation 91.62 feet on the 26th and 27th. The maximum momentary discharge on record for February is 43,500 c. f. s. at elevation 105.25 feet on February 1, 1909, and the minimum is 400 c. f. s. at 91.35 feet on February 29, 1912.

Gatun Lake varied in elevation during February from a maximum of 85.71 feet on the 1st to a minimum of 84.62 feet on the 27th. The total yield of Gatun Lake watershed was 1,085 c. f. s. which is 38 per cent below the 18-year February average. The maximum total yield on record for February is 5,077 c. f. s. in 1915, and the minimum is 705 c. f. s. in 1920. The net yield (total yield minus evaporation) amounted to 120 c. f. s. or 290 million cubic feet, which is equivalent to 0.06 foot on Gatun Lake.

Miraflores Lake varied between a maximum of 53.88 feet on the 10th and a minimum of 53.20 feet on the 8th. The mean elevation for the month was 53.53 feet, and at midnight on the 28th the lake stood at 53.42 feet.

SEISMOLOGY.

Six seismic disturbances were recorded during the month. Four were of distant origin and two of local origin.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 2,990,200 kilowatt hours, and the computed water consumption was 2,287,408,336 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 2,458,600 kilowatt hours, and the fuel oil consumption was 4,809.94 barrels. This station continued to carry a one-engine load of approximately 2,600 kilowatts for the purpose of water conservation, and on the 17th of the month a second engine was put into operation for the remainder of the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 41 vessels during the month. There were 346 work orders issued during the month, as compared with 386 issued during the previous month.

MECHANICAL DIVISION.

During the month of February, 1931, miscellaneous repairs were made on 50 vessels at Cristobal and 30 at Balboa. Six vessels were dry-docked at Cristobal and 3 at Balboa. The tanker *El Bauro* entered drydock for complete overhaul of engines, deck and hull. The overhaul of the M. S. *Frost* was completed during the month. Work was carried forward on extensive repairs to the M. S. *Yomachichi*.

MUNICIPAL ENGINEERING DIVISION.

On the Thatcher Highway under construction from the west bank of the Canal opposite Balboa to the Zone boundary line near Arraijan, 19,400 cubic yards of grading were completed, 2 culverts constructed, headwalls placed on 4 culverts, and 800 cubic yards of rock crushed. On the Paraiso-Summit road cut-off, fabrication of bar mats was completed and 300 square yards of pavement laid. In connection with the municipal improvements at the Naval Air Station at Coco Solo, 2,515 square yards of road sub-grade were completed, and 3,000 square yards of 6-inch concrete road surface was laid, in addition to other miscellaneous municipal work.

Work on several improvement projects in the cities of Colon and Panama, and in the Canal Zone, was carried on.

The usual work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 768,638,000 gallons.

DREDGING DIVISION.

The general movement along the waterfront of West Culebra slide continued throughout the month, with an average movement of two-tenths of a foot toward the Canal, between stations 1770-00 to 1777-00 and 1788-00 to 1794-00 W. There was no southward movement between stations 1770-00 and 1797-00 W. The reference points on this slide showed no movement. There were no other slides or any new bank breaks in the Cut during the month. There was no interference with shipping on account of slides during the month.

A suction dredge worked the entire month in the Folks River borrow pit, excavating a total of 111,000 cubic yards of sand, coral, and clay. This material was pumped to the Colon fill with the assistance of the relay pump barge through an average pipe line length from the dredge to relay of 1,630 feet and from the relay to the dump of 3,972 feet, a total of 5,602 feet. The total amount of material removed from the borrow pit to date is 462,800 cubic yards of which 308,400 cubic yards remained in place, giving a run-off of 33.4 per cent. The area of completed fill is 16.5 acres.

The total excavation during February, 1931, was 1,372,850 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
Work excavation:			
Canal prism, Gatun Lake—			
Project No. 3.....	28,050	31,600	59,650
Canal prism, Gaillard Cut—			
Project No. 3.....	49,200	12,300	61,500
Maintenance.....	8,750	34,950	43,700
Canal prism, Pacific entrance—			
Maintenance.....	1,097,000		1,097,000
Plant excavation:			
Colon fill.....	111,000		111,000
Total.....	1,294,000	78,850	1,372,850

The ferry operating at the north end of Pedro Miguel locks functioned 28 days during the month. One thousand two hundred and sixty-eight (1,268) single trips were made, and 402 Panama Canal, 1,530 U. S. Army, and 6,492 other vehicles, a total of 8,424, were ferried across the Canal.

MADDEN DAM PROJECT.

A report was received from the Designing Engineer who, with four assistants, is in Denver collaborating with engineers of the United States Reclamation Service in connection with the design and specifications of the main dam and power station, and the saddle dams. Work of an outstanding nature on which considerable progress was made by the Canal engineers and their consultants was the final report on stress and stability studies, which was in the course of preparation at the end of the month; computations for design of spillway piers, drum gate chambers, and water pressure on spillway crest; designs for the 82-inch internal differential needle valves, which were practically completed and ready for detailing at the end of the month; study for special crane for handling needle valve parts; studies of several arrangements of the power units on what is believed to be the final layout. Parallel with the machinery layouts, architectural studies for the power plant buildings are being developed. Effects of 1,000-year flood were treated in a paper, furnishing the data for fixing the elevation of the top of the spillway gates at elevation plus 250 feet.

On the Isthmus, studies for Alhajuela water supply were continued and preliminary plans and estimates, accompanied by sketches, were prepared; preparation of drawings and charts for final geological report was continued; study and report on bids for fabrication and delivery of transmission line towers, and study of preliminary layout of outdoor substation were made; final rock contour map at dam site, final gravel map, and revised drawings to conform with final cross-section at dam site were made and forwarded to Denver. Work of a miscellaneous nature consisting of surveying, silt investigations, seepage investigations, gaugings, geological investigations, etc., was continued.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on February 28, 1931, was 24,209, composed of 8,161 Americans, 2,957 of whom were men, 2,469 women, and 2,735 children; 178 Europeans, 87 of whom were men, 31 women, and 60 children; and 15,870 West Indians, 4,428 of whom were men, 2,831 women, and 8,611 children. The total number of persons in quarters on February 28, 1930, was 22,316.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of February 18, 1931, with a comparison of the working force for the preceding month and for February, 1930:

	Total employees.		As of February 18, 1931.		
	February, 1930.	January, 1931.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	195	116	57	63	120
Electrical.....	399	418	169	232	401
Municipal Engineering.....	842	1,213	100	1,093	1,193
Lock Operation.....	983	2,006	354	1,504	1,858
Dredging.....	1,282	1,195	199	1,004	1,203
Madden Project.....	1,203	249	14	187	201
Mechanical.....	1,429	1,362	474	838	1,312
Marine.....	842	836	199	659	858
Fortifications.....	469	340	22	293	315
Total.....	7,635	7,735	1,588	5,873	7,461

	Total employees.		As of February 18, 1931.		
	February, 1930.	January, 1931.	Gold.	Silver.	Total.
Supply Department:					
Quartermaster.....	2,377	1,905	200	1,641	1,841
Commissary.....	1,565	1,553	232	1,390	1,622
Cattle Industry—Plantations.....	116	117	2	210	212
Hotel Tivoli.....	130	121	8	119	127
Hotel Washington.....	119	110	8	104	112
Transportation.....	331	324	79	246	325
Total.....	4,638	4,130	529	3,710	4,239
Accounting Department.....	211	203	203	6	209
Health Department.....	1,156	1,100	282	848	1,130
Executive Department.....	846	884	546	332	878
Total.....	2,213	2,187	1,031	1,186	2,217
Panama Railroad Company:					
Superintendent.....	339	317	45	266	311
Transportation.....	189	196	63	127	190
Receiving and Forwarding Agency.....	1,523	1,741	81	1,262	1,343
Coaling Stations.....	365	270	38	220	258
Total.....	2,416	2,524	227	1,875	2,102
Grand total, February, 1930.....	16,932				
Grand total, January, 1931.....		16,576			
Grand total, February, 1931.....			3,375	12,644	16,019

Additions to the gold force on the Isthmus in February were as follows: Reemployed in the United States, 1; employed on the Isthmus, 5; reemployed on the Isthmus, 8; total, 14. Separations from the gold force totaled 20, as follows: Resigned 9; discharged, 9; retired, 1; died, 1. At the end of the month there were on file 775 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 160 deaths occurred during the month of February, 1931, among the population of the Canal Zone, and the cities of Panama and Colon (population, 143,636), which is equivalent to an annual death rate of 13.37 per 1,000 population. The leading causes of death were: Tuberculosis (various organs), 33; pneumonia (broncho and lobar), 17; nephritis (acute and chronic), 10; organic diseases of the heart, 9; and diarrhea and enteritis, 9. There were 8 deaths from syphilis, 6 from apoplexy, and 2 from leprosy. There were 26 deaths among nonresidents, which are not included in the above statistics.

There were 302 live births and 23 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 27.15. Deaths among children under 1 year of age numbered 34, giving an infant mortality rate based on the number of live births reported, of 112.58.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during the month was 100, of whom 14 were employees (2 white and 12 colored), 18 were members of employees' families (all colored), 8 were Canal Zone agriculturists, 37 were other civilian nonemployees, and 23 were Army and Navy personnel. Of the 32 employees and members of employees' families, 28 were probably infected outside our sanitized areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick.

There were three deaths from malaria among residents—one a colored child who had been visiting in the interior where the infection was contracted, one a Canal Zone agriculturist, and one a Panamanian child residing in the city of Panama.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$264,998.85, of which \$257,664.13 was for the Department of Operation and Maintenance, and \$7,334.72 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material, amounted to \$43,701.10.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of January, 1931, as compared with January, 1930, with the figures for the first 7 months of the current fiscal year as compared with the same period in the fiscal year 1930.

It is impossible to submit figures for the month of February at the time of writing this report, since all charges, etc., involved in the accounting have not been completed.

	January, 1930.	January, 1931.	To the end of January.	
			Last year.	This year.
Tolls.....	\$2,360,222.49	\$2,108,157.19	\$16,188,773.35	\$15,005,047.24
Other receipts.....	340,803.94	394,755.21	2,549,246.26	2,423,055.33
Total transit revenues.....	2,701,026.43	2,502,912.40	18,738,019.61	17,428,102.57
Total transit expenses.....	1,076,367.27	1,286,496.79	7,691,514.36	8,074,443.63
Net transit revenues.....	1,624,659.16	1,216,415.61	11,046,505.25	9,353,658.94
Three per cent capital charge.....	622,767.81	626,623.19	4,345,307.14	4,382,960.34
Transit surplus.....	1,001,891.35	589,792.42	6,701,198.11	4,970,698.60
Business revenues.....	1,764,379.02	1,620,774.47	11,254,283.31	10,643,494.89
Business expenses.....	1,665,116.84	1,554,698.71	10,620,156.53	10,158,015.53
Net business revenues.....	99,262.18	66,075.76	634,126.78	485,479.36
Three per cent capital charge.....	63,751.10	65,444.98	463,601.63	481,338.98
Business surplus.....	35,511.08	630.78	170,525.15	4,140.38
Combined revenues.....	4,465,405.45	4,123,686.87	29,992,302.92	28,071,597.46
Combined expenses.....	2,741,484.11	2,841,195.50	18,311,670.89	18,232,459.16
Net revenues.....	1,723,921.34	1,282,491.37	11,680,632.03	9,839,138.30
Three per cent capital charge.....	686,518.91	692,063.17	4,808,908.77	4,864,299.32
Combined surplus.....	1,037,402.43	590,428.20	6,871,723.26	4,974,838.98

Respectfully,

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending March 21, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Durazzo.....	Hamburg-American Line		March 8.		133
Cartago.....	United Fruit Co.		March 8.		57
Colombia.....	Royal Netherlands S. S. Co.		March 8.		4
Pastores.....	United Fruit Co.	March 8.	March 8.	5	672
Helder.....	Royal Netherlands S. S. Co.	March 8.	March 9.	97	146
Cauca.....	National Navigation Co.		March 9.		60
San Jose.....	French S. S. Line.	March 9.	March 9.	20	195
Oroya.....	Pacific Steam Navigation Co.	March 9.	March 9.	57	107
Gen. M. H. Sherman.	Sudden & Christenson	March 9.	March 10.	183	(¹)
Guatemala.....	Panama Mail S. S. Co.	March 9.	March 10.	255	85
City of San Francisco.	Panama Mail S. S. Co.	March 9.	March 11.	1,506	878
San Clemente.....	Quaker S. S. Line.	March 10.	March 11.	150	(²)
Vancouver.....	Hamburg-American Line	March 10.	March 11.	105	634
Galicia.....	Hamburg-American Line	March 10.	March 11.	68	41
Pollux.....	Anglo-Saxon Petroleum Co.	March 10.	March 11.	11,941	(²)
Narenta.....	Pacific Steam Navigation Co.	March 10.	March 11.	(¹)	111
Caldas.....	National Navigation Co.	March 10.	March 13.	209	150
Tela.....	United Fruit Co.	March 11.	March 11.	651	46
Kwanto Maru.....	Osaken Shosen Kaisha	March 11.	March 11.	25 ^{1/2}	(²)
Witell.....	North German Lloyd.	March 11.	March 11.	3	266
Carare.....	Elders & Fyffes, Ltd.	March 11.	March 11.	3	(²)
Cristobal.....	Panama R. R. S. S. Line.	March 11.	March 11.	5,542	
Ulua.....	United Fruit Co.	March 11.	March 12.	475	14
Davision.....	Leyland S. S. Line.	March 11.	March 12.	383	(²)
Nebraska.....	Royal Mail Steam Packet Co.	March 11.	March 12.	242	33
Sixaola.....	United Fruit Co.	March 11.	March 12.	458	261
Calí.....	United Fruit Co.	March 11.	March 14.	349	164
Pearl Marie.....	Roland Line.	March 12.	March 12.	(¹)	28
Duchess D'Aosta.....	R. Feuillebois	March 12.	March 12.	55	39
Salvador.....	Navigazione Libera Triestina.	March 12.	March 12.	369	
C. C. Acme.....	Pacific Steam Navigation Co.	March 12.	March 12.	1	(²)
	R. Foster.	March 12.	March 12.		

¹ No cargo discharged.² No cargo laded.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Amassis	Hamburg-American Line	March 12. . . .	March 13. . . .	83	177
Esfuerza	J. Asmussen	March 12. . . .	March 12. . . .	50	.....
Austvaengen	Aluminium Line	March 12. . . .	March 13. . . .	320	83
Martinique	Columbian S. S. Line	March 12. . . .	March 13. . . .	23	266
Colombia	Panama Mail S. S. Co.	March 12. . . .	March 13. . . .	1,034	235
Nosa Queen	N. O. & S. A. S. S. Co.	March 12. . . .	March 13. . . .	227	80
Aconcagua	Chilean S. S. Line	March 13. . . .	March 13. . . .	(¹)	7
Laguna	Pacific Steam Navigation Co.	March 13. . . .	March 13. . . .	21	62
Colombia	Royal Netherlands S. S. Co.	March 13. . . .	March 14. . . .	14	926
Tacoma	Hamburg-American Line	March 13. . . .	March 14. . . .	128	27
Cefalu	Standard Fruit & S. S. Co.	March 13. . . .	March 14. . . .	97	454
Heredia	United Fruit Co.	March 14. . . .	March 14. . . .	202	.....
Tela	United Fruit Co.	March 14. . . .	March 14. . . .	231	455
Santa Elisa	Grace Line	March 14. . . .	March 14. . . .	67	.....
Oropes	Pacific Steam Navigation Co.	March 14. . . .	March 14. . . .	62	48
San Jose	United Fruit Co.	March 10. . . .	March 12. . . .	1,141	(²)
Cristobal	Panama R. R. S. S. Line	March 15. . . .	March 15. . . .	.....	540
Heredia	United Fruit Co.	March 15. . . .	March 15. . . .	.....	89
Santa Elisa	Grace Line	March 15. . . .	March 15. . . .	.....	345
Ulu	United Fruit Co.	March 15. . . .	March 15. . . .	24	655
Margaret Johnson	Johnson S. S. Line	March 15. . . .	March 16. . . .	97	(²)
Cerigo	Hamburg-American Line	March 15. . . .	March 20. . . .	623	381
Caica	National Navigation Co.	March 15. . . .	March 29. . . .	70	141½
Santa Clara	Grace Line	March 16. . . .	March 16. . . .	98	128
Dansterdijk	Holland-America Line	March 16. . . .	March 17. . . .	(¹)	198
Pacific Shipper	Furness, Withy & Co.	March 16. . . .	March 17. . . .	(¹)	337
Bodegraven	Royal Netherlands S. S. Co.	March 17. . . .	March 18. . . .	169	84
Magdalena	Hamburg-American Line	March 17. . . .	March 18. . . .	342	(²)
Pellerin de la Touche	French Line	March 17. . . .	March 19. . . .	175	488
Saramacca	United Fruit Co.	March 17. . . .	March 19. . . .	1,392	(¹)
Salvador	Pacific Steam Navigation Co.	March 18. . . .	March 18. . . .	.....	806
Sanyo Maru	Osaka Shosen Kaisha	March 18. . . .	March 18. . . .	206	33
Teno	Chilean S. S. Line	March 18. . . .	March 18. . . .	85½	46
Iriona	United Fruit Co.	March 18. . . .	March 18. . . .	958	(²)
Abraham Lincoln	Fred Olsen & Co.	March 18. . . .	March 19. . . .	487	(²)
Zacapa	United Fruit Co.	March 18. . . .	March 19. . . .	645	623
Calamares	United Fruit Co.	March 18. . . .	March 19. . . .	587	10½
Juan Sebastian Elcano	Spanish S. S. Line	March 18. . . .	March 18. . . .	228	.....
Brielle	Royal Netherlands S. S. Co.	March 18. . . .	March 21. . . .	81	533
Esfuerza	J. Asmussen	March 19. . . .	March 19. . . .	.....	13½
Samuel Bakke	Knut Knutsen Line	March 19. . . .	March 19. . . .	35	(²)
Albert Voegler	Hamburg-American Line	March 19. . . .	March 19. . . .	26	1
Donau	North German Lloyd Line	March 19. . . .	March 21. . . .	(¹)	387
Manizales	North German Lloyd	March 19. . . .	March 19. . . .	285	.....
San Lucas	States S. S. Line	March 19. . . .	March 19. . . .	108	(²)
Santa Barbara	Grace Line	March 19. . . .	March 20. . . .	308	315
Seattle	Hamburg-American Line	March 20. . . .	March 20. . . .	42	329
Port Fremantle	Commonwealth & Dominion Line	March 20. . . .	March 20. . . .	80	(²)
Bolivar	United Fruit Co.	March 20. . . .	March 21. . . .	70½	333
Corinto	Panama Mail S. S. Co.	March 20. . . .	March 20. . . .	1,680	.....
Contessa	Standard Fruit & S. S. Co.	March 20. . . .	March 21. . . .	267	433
Rhein	Hamburg-American Line	March 20. . . .	March 21. . . .	97	88
Aachen	North German Lloyd	March 20. . . .	March 21. . . .	(¹)	729
Parissima	United Fruit Co.	March 21. . . .	March 21. . . .	64	.....
Santa Teresa	Grace Line	March 21. . . .	March 21. . . .	117	107
Caldas	National Navigation Co.	March 21. . . .	March 21. . . .	242	(²)
St. Joseph	French Line	March 21. . . .	March 21. . . .	710	.....
Magdalena	Hamburg-American Line	March 21. . . .	March 21. . . .	1	.....
Iriona	United Fruit Co.	March 21. . . .	March 21. . . .	15	140
Dramatist	T. & J. Harrison	March 21. . . .	March 21. . . .	219	.....

¹ No cargo discharged.

² No cargo laded.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 19, 1931.

No. 855.

Caribbean Sea, St. Andrews Island, light reported not burning. The following is quoted from Notice to Mariners No. 10, Washington, D. C., dated March 7, 1931:

The master of the yacht *Ulowana* reports that St. Andrews Island Light was not burning on the night of February 17, 1931. The *Ulowana* passed within one-half of a mile of the light.

Approximate position: 12° 35' 54" N., 81° 40' 42" W.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, March 21, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Water draft.	Salt drat.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.									Nature.	Tons.		Gross.	Net.
Sominole 2 2.	14	18	30	15	00	30	15	02	15	9:53	British.	Anglo-American Oil Co.	425.0	57.0	16.6	Ellersmere Pt., Eng.	Ballast.	7,012	5,022		
Santa Elisa	14	15	15	2	10	15	9:47	15	16	20	American.	Grave Line	360.3	51.7	20.8	New York, N. Y.	General.	2,136	5,957	4,325	
Point Montara	14	23	59	15	2	10	9:53	15	16	20	American.	Gulf Pac. Redwood Line	324.0	46.2	20.0	Tampa, Fla.	General.	2,480	3,984	2,612	
Tweedbank 2	15	4	45	6	15	15	10:55	15	16	00	British.	Bank Line, Ltd.	426.0	57.4	18.10	Baltimore, Md.	Shanghai, Wash.	1,366	3,623	5,412	
Minnesota	15	4	45	6	15	15	13:37	15	14	45	American.	Amer.-Hawaii Line.	407.7	53.7	18.0	Boston, Mass.	Portland, Oreg.	2,557	7,150	5,024	
Sapelo 1	15	10	10	13	10	15	15	18:30	15	18	American.	U. S. Navy.	461.0	60.0	60.0	Beaumont, Texas.	Balboa, C. Z.	6,925	4,982		
New Jersey 1	15	13	20	15	14	00	15	21:28	15	22	American.	The Texas Co.	416.0	56.0	22.0	Providence, R. I.	Los Angeles, Calif.	6,925	4,982		
Grandley Hall	15	14	45	14	55	15	22	25	15	23	British.	Liter-Freighting Co.	412.0	56.0	17.0	Norfolk, Va.	Tecopailla, Chile.	6,554	4,633		
Salinas 1	15	19	15	16	00	10	16	9:30	16	9:30	American.	U. S. Navy.	463.0	60.0	60.0	U. S. port.	Fuel oil.	6,554	4,633		
Chinese	15	23	10	16	1	45	16	10:20	16	11	British.	Prince Line, Ltd.	441.6	60.3	18.0	New York, N. Y.	Singapore, Str. Set.	2,203	9,254	6,265	
El Cervo 1	16	00	25	16	3	25	16	10:51	16	13	British.	Anglo-Leonard, Oil Co.	407.4	52.2	19.2	Philadelphia, Pa.	La Libertad, Ecua.	6,046	4,326		
Agworld 1	16	2	30	16	4	40	16	13:00	16	14	American.	Richfield Oil Co.	429.0	59.0	20.0	Miami, Fla.	Los Angeles, Calif.	7,720	5,615		
Margaret	15	14	30	16	10	18	16	16:55	16	22	00	Swedish.	Johnson Line.	405.0	54.0	20.8	Stockholm, Sweden	San Francisco, Cal.	3,152	7,048	5,337
Marore	15	12	00	16	11	15	16	18:43	16	20	American.	Ore S. S. Corp.	550.3	72.2	24.3	Baltimore, Md.	Cruz Grande, Chile	15,551	4,297		
Salma City	16	11	10	16	11	35	16	19:41	16	20	American.	Isidman S. S. Lines	424.0	52.0	25.4	Baltimore, Md.	Tacoma, Wash.	7,453	7,611	5,450	
Hendon Hall	16	11	05	16	12	25	16	20:50	16	21	50	British.	Liver, Freighting Co.	399.6	53.0	17.8	Baltimore, Md.	Antofagasta, Chile.	2,349	5,852	4,112
Sacramento 3	16	18	05	17	00	01	17	10	28	17	American.	U. S. Navy.	224.0	40.0	24.2	Cristobal, C. Z.	Gatun, C. Z.	10,853	8,271		
California	17	2	25	17	2	25	17	13:53	17	16	10	American.	The Texas Co.	380.0	53.2	17.6	Pt. Arthur, Texas.	Los Angeles, Calif.	1,338	5,654	4,123
Sutherland	17	1	15	17	6	15	17	14:45	17	15	45	American.	The Texas Co.	416.8	56.0	19.3	New York, N. Y.	Seattle, Wash.	2,529	11,110	7,894
Illinois 1	17	00	55	17	9	10	17	16:25	18	1	53	British.	Shaw, Savill & Albion.	477.6	62.9	25.11	New York, N. Y.	Los Angeles, Calif.	6,945	5,011	
Mahia.	17	00	55	17	9	10	17	16:25	18	1	53	British.	Shaw, Savill & Albion.	477.6	62.9	25.11	Glasgow, Scotland	Bluff, N. Z.	6,945	5,011	
Edward	17	13	55	17	14	45	17	21:52	17	22	45	American.	Luckenbach Line.	436.6	57.0	20.6	Boston, Mass.	Seattle, Wash.	3,237	8,543	6,427
Pacific Shipper 2	16	20	50	17	19	00	18	9:02	18	10	06	British.	Furness, Withy & Co.	420.0	52.0	18.0	Glasgow, Scotland	General.	844	7,892	5,858
Hegra	17	16	20	17	19	35	18	9:55	18	11	52	American.	Norton, Lilly & Co.	440.0	56.0	27.6	Mobile, Ala.	Vancouver, B. C.	9,322	8,353	6,113
Virginian	17	18	00	18	3	00	18	11	16	18	12	American.	Amer.-Hawaiian Line.	491.5	58.2	20.0	Boston, Mass.	Seattle, Wash.	2,300	10,491	7,601
Brazos 1	17	19	25	18	4	35	18	12:15	18	12:15	American.	U. S. Navy.	456.0	56.0	56.0	U. S. port.	Balboa, C. Z.	2,300	10,491	7,601	
Candian	17	21	30	18	6	25	18	14:12	18	15	25	British.	Can. Nat. Steamships.	400.4	52.0	19.0	Hullfax, N. S.	Auckland, N. Z.	1,373	5,654	4,139
Conqueror	17	23	45	18	7	10	18	15:18	18	16	45	British.	Donaldson Smith Line	400.4	51.3	23.6	Tampa, Fla.	Kobe, Japan	7,319	6,045	5,858
Tacoma City.	18	1	30	18	8	09	18	15:41	18	16	35	British.	Donaldson Smith Line	385.6	51.0	18.2	Glasgow, Scotland	Vancouver, B. C.	939	6,576	4,724
Moveria 2	12	1	40	18	9	20	18	17:12	18	20	11	British.	Pacific Steam Nav. Co.	215.0	33.0	15.0	Cristobal, C. Z.	Champerico, Chile.	795	1,270	757
Salvador	2-1	20	00	18	9	20	18	17:13	18	18	45	British.	Pacific Steam Nav. Co.	290.1	41.7	16.8	Cristobal, C. Z.	Valparaiso, Chile.	2,597	1,587	
Champerico	2-1	20	00	18	9	20	18	17:13	18	18	45	American.	Sun Oil Co.	480.6	66.0	21.0	Philadelphia, Pa.	Los Angeles, Calif.	7,773	5,634	
Eastern Sun 2	18	11	10	18	10	20	18	17:38	18	20	06	American.	Richfield Oil Co.	430.0	59.2	19.0	Baltimore, Md.	Los Angeles, Calif.	7,773	5,634	
Pat Doherty 1	18	11	10	18	11	20	18	18:48	18	20	06	American.	Royal Neth. S. S. Co.	400.0	58.0	20.0	Hamburg, Germany	Corral, Chile	1,504	7,334	6,018
Boedegraven 17	19	40	18	12	10	18	19	15	18	20	12	Dutch.	Royal Neth. S. S. Co.	400.0	58.0	20.0	Hamburg, Germany	Corral, Chile	1,504	7,334	6,018

¹ Tanker.

² Motor ship.

³ Cumbout.

⁴ 75,645 barrels fuel oil.

⁵ Steel, iron, and general.

⁶ Phosphate and general.

Arizona	18	16, 30	18	20, 10	19	9, 19	19	10, 27	American	The Texas Co.	391.8	51.3	21.0	Pt. Arthur, Texas.	Los Angeles, Calif.	3,000	5,552
Brandsville	18	21, 23	10	3, 20	19	10, 05	19	11, 32	American	Ford Motor Co.	221.0	43.6	19.6	Chesler, Pa.	Seattle, Wash.	2,430	2,656
Washington	18	22, 23	10	4, 40	19	13, 13	19	13, 40	Norwegian	Stranex & Co.	386.0	54.2	13.9	Boston, Mass.	Portland, Ore.	6,718	5,058
Saranuwa	17	14, 15	19	6, 10	19	14, 00	19	14, 55	American	The Texas Co.	425.8	57.7	17.0	Baltimore, Md.	Los Angeles, Calif.	7,484	9,308
San Lucas	19	00, 35	19	9, 48	19	17, 58	19	14, 55	American	United Fruit Co.	336.0	42.0	17.8	Cristobal, C. Z.	San Francisco, Cal.	3,338	7,643
Samuel Balcke	19	2, 20	19	10, 30	19	19, 02	20	3, 42	Norwegian	States S. S. Co.	391.0	53.0	18.0	Oslo, Norway	Yancover, B. C.	3,082	5,720
Abraham	19	1, 00	19	11, 15	19	19, 31	20	2, 11	Danzig	W. Tankschiff Rheiderl	470.6	63.0	18.0	Hamburg, Germany	Talcahuano, Chile.	3,082	5,720
Lincoln	18	22, 30	19	12, 08	19	20, 12	22	3, 20	Norwegian	Fred Olsen & Co.	436.0	64.2	25.6	Oslo, Norway	Talara, Peru.	9,302	6,127
Santa Barbara	19	19, 05	20	3, 25	20	10, 59	20	15, 05	American	Grace Line	466.0	56.0	23.3	New York, N. Y.	Yancover, B. C.	5,787	8,005
America	19	15, 55	20	4, 50	20	14, 46	20	15, 40	Danish	East Asiatic Co.	465.0	62.0	19.0	Copenhagen, Den.	Vancouver, B. C.	2,479	10,687
Cauca	15	20, 55	20	4, 35	20	14, 30	20	18, 00	Colombian	National Navigation Co.	107.9	22.9	9.0	Cristobal, C. Z.	Ballast	11,060	8,076
Pacific Hentlock	19	14, 15	20	6, 10	20	17, 35	20	18, 35	American	Damon S. S. Corp.	409.5	54.2	19.0	Philadelphia, Pa.	Buenaventura, Col.	150	262
Pennsylvania	20	5, 40	20	6, 30	20	15, 37	21	1, 20	American	Panama-Pacific Line	586.4	80.3	27.0	New York, N. Y.	Tacoma, Wash.	3,499	6,630
Harrison	20	5, 50	20	7, 55	20	16, 35	20	21, 35	American	Dollar Line	522.0	62.0	27.0	New York, N. Y.	San Francisco, Cal.	2,869	21,262
Bridger	19	15, 20	20	8, 45	20	18, 35			American	U. S. Navy	400.0	55.0	20.6	Norfolk, Va.	Round the world	3,826	12,618
Asheville	7	8, 15	20	8, 55					American	U. S. Navy	225.0	41.0	16.0	Cristobal, C. Z.	Balboa, C. Z.	1,290	
Raby Castle	19	21, 45	20	9, 35	20	18, 55	20	19, 45	British	Barber S. S. Line	400.0	62.0	17.3	New York, N. Y.	Manila, P. I.	2,212	6,805
Silvсандал	19	18, 02	21	4, 50	21	13, 23	21	14, 25	British	Silver Line, Ltd.	486.0	62.0	19.6	New York, N. Y.	Colombo, Ceylon	4,427	9,578
Chilore	19	18, 02	21	4, 50	21	13, 23	21	14, 25	American	Ore S. S. Corp.	549.0	72.0	21.5	Norfolk, Va.	Cruz Francis, Chile	387	1,572
Cerigo	15	23, 15	21	6, 05	21	14, 35	21	15, 45	German	Hamburg-American Line	227.2	34.4	14.3	Cristobal, C. Z.	Guayaquil, Ecuador	387	1,572
San Diego	21	3, 05	21	6, 01	21	14, 27	21	15, 25	American	Williams S. S. Line	376.4	52.0	16.8	Baltimore, Md.	Tacoma, Wash.	1,225	5,453
Eleanor	20	23, 40	21	7, 05	21	15, 35	22	14, 00	American	Arrow Line	410.5	54.3	18.0	Baltimore, Md.	Seattle, Wash.	2,021	6,572
Christenson	21	4, 50	21	7, 30	21	16, 52	21	18, 10	Japanese	Kokusa Kisen Kaisha	385.0	51.0	26.5	Galveston, Texas	Moji, Japan	6,895	5,219
Chifu Maru	21	7, 15	21	8, 30	21	17, 18	21	18, 10	American	Standard Transp. Co.	468.3	62.7	20.0	New York, N. Y.	Los Angeles, Calif.	10,084	7,388
Monique	21	8, 15	21	9, 30	21	17, 40	21	22, 10	French	Desmarais Freres.	425.0	57.0	17.0	I Havre, France.	Los Angeles, Calif.	7,106	5,001
Siljestad	21	11, 35	21	13, 15	21	20, 37	21	25	Norwegian	Pearlry & Eger.	376.5	54.0	21.8	Louison, Texas	Shanghai, China.	4,761	6,264
Mananda	21	12, 50	21	14, 00	21	21, 34	21	22, 54	British	North & M. M. Wre.	402.0	60.0	16.0	Hull, England.	Vancouver, B. C.	6,085	4,289
Donau	19	10, 20	21	14, 55	21	22, 25	21	23, 16	German	North German Lloyd	521.0	64.0	22.11	Bremen, Germany	Los Angeles, Calif.	1,372	11,007
American	21	14, 10	21	15, 35	21	22, 50	22	00, 05	American	Amer-Hawaiian Line	404.6	54.0	18.0	Boston, Mass.	Portland, Ore.	2,647	6,777

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Wright	15	6, 18	15	14, 35	American	U. S. Navy	488.0	58.0	Balboa, C. Z.	Cristobal, C. Z.							
Eagle No. 58	15	6, 42	15	14, 40	American	U. S. Navy	200.0	28.0	Balboa, C. Z.	Cristobal, C. Z.							
Page No. 35	15	6, 52	15	15, 30	American	U. S. Navy	200.0	28.0	Balboa, C. Z.	Cristobal, C. Z.							
Mallard No. 44	15	6, 52	15	15, 30	American	U. S. Navy	187.0	33.0	Balboa, C. Z.	Cristobal, C. Z.							
Bencnlight	14	21, 25	15	7, 30	15	19, 10	15	20, 50	American	Union Oil Co.	435.0	56.0	27.4	Los Angeles, Calif.	Baltimore, Md.	9,833	7,482
Pacific Oak	15	11, 50	15	12, 43	15	20, 55	15	20, 55	American	Dipon S. S. Corp.	409.7	54.0	25.0	Seattle, Wash.	Norfolk, Va.	6,773	6,687
Caixa	15	13, 05	15	13, 46	15	20, 55	15	20, 55	Colombian	National Navigation Co.	107.0	22.9	9.0	Buenaventura, Col.	Cristobal, C. Z.	623	362
Cerigo	15	14, 25	15	15, 35	15	23, 15			German	Hamburg-American Line	227.2	34.4	14.1	Guayaquil, Ecuador	Cristobal, C. Z.	623	362
Vestal	16	6, 12	16	6, 32	American	U. S. Navy	450.0	60.0	Balboa, C. Z.	Cristobal, C. Z.							
Sacramento	16	6, 26	16	18, 05	17	00, 01			American	U. S. Navy	224.0	40.0		Balboa, C. Z.	Cristobal, C. Z.		
Northern	16	2, 15	16	7, 17	16	18, 55	16	18, 55	American	Sun Oil Co.	480.6	66.0	29.0	Los Angeles, Calif.	Chester, Pa.	13,515	9,761
Santa Clara	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11,080
Tanker	16	7, 45	16	9, 15	16	17, 25	17	00, 14	American	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.	5,647	11

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Gothic Star.	16	00 25	16	9 46	16	19 40	16	19 40	British	Blue Star Line, Ltd.	420.5	54.7	23.2	N. Westminster, B. C.	Newcastle, England	Fruit, general.	4,506	7,521	5,852
Dausordijk	16	4 15	16	10 31	16	20 55	17	9 25	Dutch	Holland-America Line.	490.8	64.6	30.0	Vancouver, B. C.	Rotterdam, Holland	General.	9,381	11,721	8,351
Chilcoq.	16	4 45	16	10 47	16	21 35	16	23 40	American	Inter. Freightng Corp.	411.5	54.1	24.0	Iquique, Chile.	Savannah, Ga.	Nitrates.	7,950	6,609	4,973
Northumber-land	15	22 45	16	12 16	16	22 25	16	22 25	British	Federal Steam Nav. Co.	530.5	63.0	27.0	N. Plymouth, N. Z.	Glasgow, Scotland.	Frozen, general.	6,795	13,263	9,124
Tashmoo.	16	12 30	16	13 39	16	23 20	16	23 20	American	Charles Nelson & Co.	324.0	46.2	23.0	Seattle, Wash.	New York, N. Y.	Lumber, general.	4,200	3,934	2,628
Port Duedin	16	9 15	16	14 03	17	00 10	17	00 10	British	Com'ith & Dom. Line.	466.9	59.8	26.0	Dunedin, N. Z.	London, England.	Frozen, general.	5,350	9,429	7,226
Anticuan	16	13 30	16	15 09	17	1 55	17	1 55	American	Rectifing Oil Co.	433.6	56.2	27.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline.	9,410	7,425	5,073
White Shadow	16	12 45	16	18 08	17	1 55	17	1 55	American	E. H. Norton.	77.7	22.2	9.0	Gusayqui, Ecuador	Cristobal, C. Z.	Ballast.	98	55	55
California.	16	12 15	17	6 10	17	14 05	17	16 25	American	Panama-Pacific Line.	574.4	80.3	30.0	San Francisco, Cal.	New York, N. Y.	General.	6,306	24,506	17,565
Saramacca.	16	15 30	17	6 36	17	14 45	17	16 10	American	United Fruit Co.	336.7	42.0	21.0	San Francisco, Cal.	Cristobal, C. Z.	Coffee, general.	1,323	3,668	2,308
Dilworth.	16	14 15	17	7 17	17	15 55	17	15 55	American	Shell Oil Co.	435.0	58.0	27.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	10,000	7,441	5,077
Kansan.	17	5 30	17	8 18	17	18 40	17	18 40	American	Amer-Hawaiian Line.	404.6	53.9	27.0	Portland, Ore.	Boston, Mass.	General.	7,277	6,779	4,921
Ward	17	2 50	17	9 04	17	19 25	17	19 25	American	Roosevelt S. S. Co.	395.5	55.0	26.2	Fremantle, Aust'lia.	Baltimore, Md.	General.	7,583	7,312	5,247
Doris Kellogg	17	10 45	17	11 35	17	20 30	17	20 30	American	U. S. Tankship Corp.	390.0	54.2	28.0	Port Allen, T. H.	New Orleans, La.	Molasses.	7,750	6,209	4,303
Sanyo Maru	17	17 35	17	18 10	18	1 00	18	1 00	Japanese	Osaka Shosen Kaisha.	446.0	90.0	26.0	Hoogkchang, China.	New York, N. Y.	General.	5,317	8,942	6,251
Brand	17	17 50	17	18 58	18	3 00	18	3 00	Norwegian.	J. J. Moore & Co.	380.0	54.7	26.0	Kolisichang, Shm.	Nuevitas, Cuba.	Rice.	8,220	6,851	5,131
Anglo	17	18 00	17	19 09	18	4 40	18	10 20	British	Nitrate Prod. S. S. Co.	426.0	58.0	22.0	Port Eric, Aust'lia.	London, England.	Wool, wheat.	6,400	7,680	5,680
Teno.	17	19 20	18	6 22	18	16 35	18	19 20	Chilean	So. American S. S. Co.	421.8	56.0	26.0	Talcahuano, Chile.	New York, N. Y.	General.	4,640	7,764	4,672
Saluria.	17	20 18	18	6 46	18	17 00	18	17 25	British	Donaldson Line, Ltd.	425.0	56.0	27.0	Vancouver, B. C.	Glasgow, Scotland.	General.	7,662	7,827	5,429
Carler.	18	2 45	18	7 33	18	17 55	18	19 20	Belgium	Cie. Maritime Belge.	471.1	60.8	26.0	Vancouver, B. C.	Antwerp, Belgium.	General.	10,450	9,264	7,044
Canadian	18	3 10	18	8 55	18	18 50	18	18 50	British	Can. Nat. Steamships.	400.3	52.2	25.0	Melbourne, Aust'lia.	Halifax, N. S.	General.	2,205	5,906	4,141
Britsher	18	00 45	18	12 28	18	20 50	21	14 55	Dutch	Royal Neth. S. S. Co.	402.4	58.2	26.0	Corral, Chile.	Amsterdam, Holland	General.	8,229	7,322	4,798
Brelle.	18	17 40	18	18 40	19	07 05	19	10 35	American	Bechtelium Steel Co.	570.3	72.2	35.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore.	21,650	15,551	4,297
Steeore.	18	17 50	18	18 55	19	3 25	19	10 05	German	Hamburg-America Line	409.8	53.8	24.0	Valparaiso, Chile.	Hamburg, Germany	Sugar, cotton.	6,545	7,173	5,514
Albert Vogler	18	17 50	18	18 55	19	3 25	19	10 05	German	Hamburg-America Line	409.8	53.8	24.0	Valparaiso, Chile.	Hamburg, Germany	Sugar, cotton.	6,545	7,173	5,514
Harry	18	19 10	18	20 05	19	4 25	19	4 25	American	Luckenbach Line.	448.9	60.2	30.0	Seattle, Wash.	Boston, Mass.	Lumber, general.	8,541	9,262	6,853
Lukenbach.	18	18 45	19	6 03	19	17 45	19	17 45	American	Ishman S. S. Lines	410.0	56.0	31.4	Portland, Ore.	Avonmouth, Eng.	Grain, general.	10,102	7,780	5,811
Challenger	19	3 30	19	6 54	20	00 20	21	22 10	German	North German Lloyd.	431.2	56.4	26.0	Talcahuano, Chile.	Hamburg, Germany	General.	7,270	7,196	4,956
Aachen.	19	3 30	19	6 54	20	00 20	21	22 10	German	North German Lloyd.	431.2	56.4	26.0	Talcahuano, Chile.	Hamburg, Germany	General.	7,270	7,196	4,956
Chewink	19	6 57	19	17 40	19	17 40	19	17 40	American	U. S. Navy.	180.0	35.6		Balboa, C. Z.	Cristobal, C. Z.				
No. 39	19	7 29	19	18 30	19	18 30	19	18 30	American	U. S. Navy.	328.2	45.7		Balboa, C. Z.	Cristobal, C. Z.				
Bushnell	19	7 35	19	18 30	19	18 30	19	18 30	American	U. S. Navy.	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.				
S-14	19	7 35	19	18 30	19	18 30	19	18 30	American	U. S. Navy.	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.				
S-16	19	7 35	19	18 30	19	18 30	19	18 30	American	U. S. Navy.	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.				
S-10	19	8 39	19	19 25	19	19 25	19	19 25	American	U. S. Navy.	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.				
S-11	19	8 39	19	19 25	19	19 25	19	19 25	American	U. S. Navy.	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.				

¹ Tanker. ²⁰ Mine sweeper. ²¹ Sub tender. ²² Submarine. ²³ Copper, wine, and nitrates.

S-12 22	19	8.48	19	20	25	American	U. S. Navy	231.0	20.0	Balboa, C. Z.	Cristobal, C. Z.	
S-13 22	19	8.48	19	20	25	American	U. S. Navy	231.0	20.0	Balboa, C. Z.	Cristobal, C. Z.	
S-17 22	19	9.25	19	20	25	American	U. S. Navy	231.0	20.0	Balboa, C. Z.	Cristobal, C. Z.	
Manizales	19	4.15	19	19	20	German	Roland Line	216.5	32.9	Guayaquil, Ecuador	General	285 1,132 741
Tamirana 1	19	7.50	19	21	30	American	Richfield Oil Co	500.0	12.0	Los Angeles, Calif	New York, N. Y.	15,100 11,667 8,542
Helen Whitlitt	19	11.30	19	20	30	American	Arrow Line	409.6	54.2	Bordeaux, Wash.	Baltimore, Md	7,000 6,667 4,910
Seattle 12	19	11.45	19	13	37	German	Hamburg-American Line	461.5	61.1	Vancouver, B. C.	Hamburg, Germany	7,894 9,257 6,834
San Felipe	19	12.15	19	13	37	American	States S. S. Co.	409.8	54.2	Seattle, Wash.	Charleston, S. C.	7,206 6,821 4,927
Vagabondia 19	18	15.00	19	14	35	American	W. J. Mellon	201.0	34.1	Catapago Islands.	Miami, Fla.	7,206 6,821 4,927
Chester 24	19	14.47	19	23	05	American	U. S. Navy	582.0	65.0	Balboa, C. Z.	Cristobal, C. Z.	929 466
Port												
Frementle 18	19	16.45	19	19	43	British	Com'th & Dom. Line.	477.4	63.4	Sydney, Australia.	London, England.	8,800 10,652 7,704
Corinto	19	19.10	19	20	12	American	Panama Mail S. S. Co.	261.1	40.0	Champerno, Gust.	Cristobal, C. Z.	1,612 2,352 1,549
Mississippi 25	20	6.17	20	17	25	American	U. S. Navy	624.0	97.6	Balboa, C. Z.	Balboa, C. Z.	
Raleigh 24	20	6.40	20	18	00	American	U. S. Navy	550.0	55.0	Balboa, C. Z.	Cristobal, C. Z.	
Antares 26	20	7.34	20	19	10	American	U. S. Navy	390.0	54.0	Balboa, C. Z.	Balboa, C. Z.	
Rail No. 26 29	20	7.38	20	19	10	American	U. S. Navy	180.6	35.7	Balboa, C. Z.	Cristobal, C. Z.	
Contocook												
No. 36 27	20	7.43	20	19	10	American	U. S. Navy	149.3	30.0	Balboa, C. Z.	Cristobal, C. Z.	
No. 157 28	20	8.16	20	20	45	American	U. S. Navy	310.0	30.11	Balboa, C. Z.	Cristobal, C. Z.	
No. 159 28	20	8.16	20	20	45	American	U. S. Navy	310.0	30.11	Balboa, C. Z.	Cristobal, C. Z.	
No. 74 28	20	8.38	20	20	45	American	U. S. Navy	310.0	30.11	Balboa, C. Z.	Cristobal, C. Z.	
No. 160 28	20	8.38	20	20	45	American	U. S. Navy	310.0	30.11	Balboa, C. Z.	Cristobal, C. Z.	
Sandpiper												
No. 31 29	20	8.50	20	22	05	American	U. S. Navy	187.0	35.0	Balboa, C. Z.	Cristobal, C. Z.	
Oregonian	20	00.50	20	03	20	American	Amer-Hawaiian Line	404.6	53.9	Seattle, Wash.	Boston, Mass.	6,900 6,754 4,800
No. 125 28	20	9.43	20	21	35	American	U. S. Navy	310.0	30.11	Balboa, C. Z.	Cristobal, C. Z.	
No. 127 28	20	9.43	20	21	35	American	U. S. Navy	310.0	30.11	Balboa, C. Z.	Cristobal, C. Z.	
No. 126 28	20	10.03	20	21	35	American	U. S. Navy	310.0	30.11	Balboa, C. Z.	Cristobal, C. Z.	
No. 128 28	20	10.03	20	21	35	American	U. S. Navy	310.0	30.11	Balboa, C. Z.	Cristobal, C. Z.	
Rigel 18	20	6.20	20	10	38	Norwegian	Strange & Co.	367.5	51.5	N. Westminster, B. C.	N. London, Conn.	5,605 5,427 4,113
Adria 18	20	8.00	20	11	21	German	Atlantic Tank Rederei.	412.6	55.1	La Libertad, Equa	Antwerp, Belgium.	8,767 6,579 4,074
Belay 28	20	11.30	20	12	21	Norwegian	Canad.-Amer. Ship. Co.	319.2	46.4	Vancouver, B. C.	Birkenhead, Eng.	3,868 3,085 2,025
Ruahine	20	9.00	20	13	48	American	N. Z. Shipping Co.	480.6	60.3	Lyttelton, N. Z.	London, England.	4,555 11,443 8,469
Somme	20	6.40	20	14	56	American	U. S. Army	448.0	58.0	San Francisco, Cal	Brooklyn, N. Y.	148
Saint Joseph	20	12.30	20	15	37	French	French Line	415.0	50.3	Talcahuano, Chile	Havre, France	7,482 6,025 4,187
Ordaz 24	20	13.50	20	17	56	Colombian	National Navigation Co.	116.0	21.1	Buenaventura, Col.	Cristobal, C. Z.	242 211 124
Caldas 24	20	15.45	21	6	12	American	U. S. Navy	556.0	55.0	Balboa, C. Z.	Cristobal, C. Z.	
Santa Teresa	20	15.45	21	6	12	American	Grace Line	360.2	51.0	Valparaiso, Chile	Cristobal, C. Z.	
Milwaukee 24	21	7.12	21	12	21	British	U. S. Navy	565.0	55.0	Balboa, C. Z.	New York, N. Y.	3,814 5,726 4,086
Surry	20	17.10	21	7.52	21	British	Federal Steam Nav. Co.	400.4	62.5	Bluff, N. Z.	Cristobal, C. Z.	7,063 10,592 7,707
Chimnamai 24	21	8.12	21	20	55	American	U. S. Navy	555.6	54.7	Balboa, C. Z.	Cristobal, C. Z.	
Dobbin 19	21	8.48	21	22	50	American	U. S. Navy	483.1	61.1	Balboa, C. Z.	Cristobal, C. Z.	
No. 248 28	21	9.09	22	00	15	American	U. S. Navy			Balboa, C. Z.	Cristobal, C. Z.	
No. 244 28	21	9.09	22	00	15	American	U. S. Navy			Balboa, C. Z.	Cristobal, C. Z.	
No. 241 28	21	9.16	22	00	30	American	U. S. Navy			Balboa, C. Z.	Cristobal, C. Z.	
No. 233 28	21	9.16	22	00	30	American	U. S. Navy			Balboa, C. Z.	Cristobal, C. Z.	
Point Reyes	20	21.25	21	9.50	22	American	Gulf-Pac. Redwood Line	324.0	46.2	Seattle, Wash.	New Orleans, La.	3,222 3,984 2,617

23 Tanker. 24 Cruiser. 25 Battleship. 26 Auxiliary. 27 Tug. 28 Destroyer. 29 Destroyer tender. 30 Lumber and tinned salmon. 31 Copper, nitrates, and lendil. 32 Nitrates, copper, and general.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
No. 249 33			21	10 36	22	4 05			American.	U. S. Navy.				Balboa, C. Z.	Cristobal, C. Z.				
No. 199 33			21	10 36	22	4 05			American.	U. S. Navy.				Balboa, C. Z.	Cristobal, C. Z.				
No. 149 33			21	10 45	22	4 45			American.	U. S. Navy.				Balboa, C. Z.	Cristobal, C. Z.				
No. 148 33			21	10 45	22	4 45			American.	U. S. Navy.				Balboa, C. Z.	Cristobal, C. Z.				
No. 153 33			21	11 16	22	6 00			American.	U. S. Navy.				Balboa, C. Z.	Cristobal, C. Z.				
No. 154 33			21	11 16	22	6 00			American.	U. S. Navy.				Balboa, C. Z.	Cristobal, C. Z.				
No. 155 33			21	11 29	22	6 20			American.	U. S. Navy.				Balboa, C. Z.	Cristobal, C. Z.				
No. 156 33			21	11 29	22	6 20			American.	U. S. Navy.				Balboa, C. Z.	Cristobal, C. Z.				
Theodore Roosevelt 34	21	16 15	21	17 07	22	14 20	22	22 20	Norwegian.	Fred Olsen & Co.	425.5	55.0	27.0	Vancover, B. C.	London, England.	General.	8,895	7,593	5,637

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Date.	Vessel.	ARRIVALS.		DEPARTURES.	
		Line.	From—	Vessel.	Line.
March 16	Ulua	United Fruit Co.	Port Limon, Costa Rica.	Republic	United States Lines.
March 16	No. 8049 35	La Crosse Aviation Co.	Laredo via waypoints.	No. 698-M 35	Pan American Airways.
March 17	Darien C-35 35	Seadta Airplane Co.	Barranquilla via waypoints.	No. 9688 35	Royal Netherlands S. S. Co.
March 17	Magdalena	Hamburg-American Line	Hamburg via waypoints.	Colombia	Colombian S. S. Line.
March 17	Pelartin de la Touche.	French Line	Have via waypoints.	Ulua	United Fruit Co.
March 18	Calamars	United Fruit Co.	New York via waypoints.	Cristobal	Panama R. S. S. Line.
March 18	Zacapa	United Fruit Co.	New York via Kingston.	Heredia	United Fruit Co.
March 18	No. 144-M 35	United Fruit Co.	Talara via waypoints.	No. 670-M 35	Pan American Airways.
March 18	No. 669-M 35	Pan American Airways	Miami via waypoints.	No. 9664 35	Colon, Rep. of Panama.
March 18	No. 9688 35	Pan American Airways	San Salvador and waypoints.	Magdalena	Hamburg-American Line.
March 19	Juan Sebastian Elcano	Spanish S. S. Line	Barcelona via waypoints.	Irigoin	Port Limon, Costa Rica.
March 20	Contessa	Standard Fruit & S. S. Co.	New Orleans and Habana.	No. 309-N 35	La Guayra via waypoints.
March 20	Bolivar	Colombian S. S. Line.	Port Limon, Costa Rica.	Zacapa	Pan American-Graec Airways.
March 21	Irigoin	Hamburg-American Line	Miami via waypoints.	Estuero 37	United Fruit Co.
March 21	No. 668-M 35	Pan American Airways	San Salvador and waypoints.	Calamates	United Fruit Co.
March 21	Parissima	Pan American Airways	New York via waypoints.	Pellerin de la Touche	French Airplane Co.
March 21	No. 309-N 35	Pan American Airways	San Salvador and waypoints.	Darien C-35 35	Colombian S. S. Line.
March 21	No. 300-N 35	Pan American-Graec Airways	La Guayra via waypoints.	Bolivar	United Fruit Co.
March 21	Pan American-Graec Airways	Pimental via waypoints.	Colon, Rep. of Panama.	Irigoin	Standard Fruit & S. S. Co.
March 21	Annetta I 36	A. Tagaropoulos	Colon, Rep. of Panama.	Contessa	Standard Fruit & S. S. Co.
March 21	Carmelita 37	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	Annetta I 36	A. Tagaropoulos
				Carmelita 37	Standard Fruit & S. S. Co.

35 Air mail carrier. 36 Motor boat. 37 Motor schooner.

* Other than ships passing through the Canal.

(Continued on page 504, column 2.)

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 20, 1931.

No. 856.

Central America, Salvador, Amapala Point Light, reported extinguished. The following is quoted from Daily Memorandum No. 6873 of the Hydrographic Office, Washington, D. C., dated March 9, 1931:

The second officer of the Swedish M. S. *Annie Johnson* reports that Amapala Point Light was observed to be extinguished on February 14, 1931 at 5.20 a. m., and again on February 17, 1931 at 7 p. m.

Approximate position: Lat. 13° 09' 12" N., long. 87° 54' 10" W.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 21, 1931.

No. 859.

Colombia, approaches to Cartagena, Salmedina Bank Light Vessel, light reported extinguished. The following message was received by the Hydrographic Office at Cristobal:

The master of the American S. S. *Bolivar* reports that on the night of March 18, 1931, the light on Salmedina Bank Light Vessel was extinguished.

Approximate position: Lat. 10° 23' 10" N., long. 75° 38' 42" W.

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending March 21, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
La Perla	United Fruit Co.	March 7.	March 7.		154
City of San Francisco	Panama Mail S. S. Co.	March 8.	March 8.	78	
Nora	Arrow Company	March 8.	March 9.	13,095	
San Jose	United Fruit Co.	March 9.	March 10.	41	
Guatemala	Panama Mail S. S. Co.	March 10.	March 10.	18	3
Triumph	Roosevelt S. S. Co.	March 10.	March 11.	164	
Chateau Thierry	U. S. Government	March 10.	March 10.	278	149
Colombia	Panama Mail S. S. Co.	March 11.	March 12.	59	
La Placencia	Union Oil Co.	March 11.	March 13.	12,319	30
Laguna	Pacific Steam Navigation Co.	March 13.	March 13.		8
Nosa Queen	N. O. & S. A. S. S. Co.	March 13.	March 13.	191	
City of San Francisco	Panama Mail S. S. Co.	March 15.	March 15.		72
Santa Elisa	Grace Line	March 15.	March 15.	148	15
Santa Clara	Grace Line	March 16.	March 16.	3	1
Saramacca	United Fruit Co.	March 16.	March 17.	118	
Margaret Johnson	Johnson Line	March 16.	March 16.	86	
Northumberland	Federal Steam Navigation Co.	March 16.	March 16.	34	
Manizales	Roland Line	March 19.	March 19.	1	
Samuel Bakke	Knutsen Line	March 19.	March 19.		50
Abraham Lincoln	Fred Olsen & Co.	March 19.	March 21.	2,293	3
Santa Barbara	Gracc Line	March 20.	March 20.	1	5
President Harrison	Dollar Line	March 20.	March 20.		4
Pennsylvania	Panama-Pacific Line	March 20.	March 20.		171
Santa Teresa	Grace Line	March 20.	March 21.	1	

Coal.

Coal, bunker, Navy Standard, is supplied to steamships including warships of all nations, trimmed in bunkers at \$7.25 at Cristobal and \$10.25 at Balboa per ton of 2,240 pounds. Extra charges are made in accordance with a published tariff for special trimming at the request of the officers of the ship, for galley, lump or run-of-mine coal in sacks, and for delivery, when coal is furnished from lighters or launches away from the coaling piers.

Coal can be bunkered by bunkering machines at any rate up to 1,500 tons per hour, regulated by the amount of necessary trimming.

Coal for cargo is sold at prices quoted on application and on authorization of the Governor.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.20 per barrel at Balboa and Cristobal, Diesel oil \$1.65 per barrel at Balboa and Cristobal.

Coal, bunker, Navy Standard, is supplied to steamships including warships of all nations, trimmed in bunkers at \$7.25 at Cristobal and \$10.25 at Balboa per ton of 2,240 pounds. Extra charges are made in accordance with a published tariff for special trimming at the request of the officers of the ship, for galley, lump, or run-of-mine coal in sacks, and for delivery, when coal is furnished from lighters or launches away from the coaling piers.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.

The Hydrographic Office at Cristobal maintain at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometric comparison, etc., furnished.

Correct time is maintained and chronometers rated.

Hours of Departure of Passenger Trains.

Following are the hours of departure of the regular passenger trains of the Panama Railroad running between the Atlantic and the Pacific:

From Colon: Daily except Sunday, 7.00 a. m., 12.15 p. m., 4.30 p. m.; Sunday only, 9.20 a. m., 4.00 p. m.

From Panama: Daily except Sunday, 7.05 a. m., 12.20 p. m., 4.35 p. m.; Sunday only, 7.05 a. m., 6.15 p. m.

The time required for passage from one terminal to the other is 1 hour and 45 minutes.

Binders for The Panama Canal Record.

Cardboard covers, punched and fitted with brass fasteners forming binders for THE PANAMA CANAL RECORD are offered for sale at 25 cents a set, for the benefit of those who wish to keep a file of the issues for ready reference. Orders may be addressed to The Panama Canal, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

Ships' Chandlery Supplies.

Panama Canal storehouses stock a complete line of ships' chandlery supplies available for sale to shipping at cost prices plus 25 per cent surcharge, which surcharge includes freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 502.

PORT OF BALBOA.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
March 16.....	Real 38	Hans Elliot.	Panama Bay, R. P.	March 16.....	Real 38	Hans Elliot.	Panama Bay, R. P.
March 16.....	Sumbi 38	Hans Elliot.	Panama Bay, R. P.	March 16.....	Sumbi 38	Hans Elliot.	Panama Bay, R. P.
March 16.....	Dos Hermanos 38	A. Valdez.	Panama Bay, R. P.	March 16.....	Dos Hermanos 38	A. Valdez.	Panama Bay, R. P.
March 18.....	Real 38	Hans Elliot.	Panama Bay, R. P.	March 18.....	Real 38	Hans Elliot.	Panama Bay, R. P.
March 20.....	Nueva Panama 39	Hans Elliot.	Panama Bay, R. P.	March 20.....	Nueva Panama 39	Hans Elliot.	Panama Bay, R. P.
March 20.....	La Union 38	Hans Elliot.	Panama Bay, R. P.	March 20.....	La Union 38	Hans Elliot.	Panama Bay, R. P.
March 20.....	Dos Hermanos 38	A. Valdez.	Panama Bay, R. P.	March 20.....	Dos Hermanos 38	A. Valdez.	Panama Bay, R. P.
March 20.....	El Libertador 38	A. Valdez.	Panama Bay, R. P.	March 20.....	El Libertador 38	A. Valdez.	Panama Bay, R. P.

* Other than ships passing through the Canal.

38 Motor ship.

39 Motor schooner.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.
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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., April 1, 1931. No. 35.

Canal Traffic During March.

During the month of March, 1931, 439 commercial vessels and 12 small nonseagoing launches transited the Canal. Tolls on the commercial vessels aggregated \$1,964,434.22, and on the launches \$45.33, or a total tolls collection of \$1,964,479.55.

The daily average of commercial vessels was 14.16, and the daily average of tolls collected was \$63,368.85, as compared with an average of 15.39 transits and \$68,425.10 in tolls for the previous month, and an average of 16.61 transits and \$72,903.30 in tolls for March, 1930. The average amount of tolls paid by each of the commercial transits was \$4,474.79, as compared with \$4,388.35 for the month of March, 1930. The daily average of both transits and tolls in the past month were the lowest of any month in the current fiscal year.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 9 months of the current fiscal year, with the daily averages of transits and tolls, and the totals for the first 9 months of the fiscal years 1930 and 1929:

	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July.....	488	\$2,180,511.82	15.74	\$70,339.09
August.....	465	2,080,230.42	15.00	67,104.21
September.....	458	2,057,103.58	15.26	68,570.12
October.....	517	2,288,982.08	16.68	73,838.13
November.....	479	2,098,357.36	15.96	69,945.25
December.....	495	2,192,583.85	15.97	70,728.51
January.....	476	2,108,140.42	15.35	68,004.53
February.....	431	1,915,902.78	15.39	68,425.10
March.....	439	1,964,434.22	14.16	63,368.85
Total, first 9 months of fiscal year 1931.....	4,248	18,886,246.53	15.50	68,927.91
Total, first 9 months of fiscal year 1930.....	4,739	20,580,233.88	17.29	75,110.34
Total, first 9 months of fiscal year 1929.....	4,846	20,421,937.10	17.68	74,532.62

In comparison with the first 9 months of the fiscal year 1930, the corresponding period this year has had 491 fewer transits and \$1,693,987.35 less tolls, decreases of 10.4 per cent and 8.2 per cent, respectively.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 31, 1931.

No. 862.

Central America, Nicaragua, Corinto Harbor, caution advised. The following message was received from the Hydrographic Office at Washington, D. C., through the Balboa Radio Station:

Due to an earthquake in Nicaragua, mariners are warned to exercise caution in approaching Corinto.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, March 28, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Salt dwt.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.							Nature.	Tons.	Gross.	Net.
Rhin ²	23	30	22	3:50	22	6:15	22	17:40	22	18:33	British	453.0	58.0	16.9	Hamburg, Germany	Valparaiso, Chile.	2,154	8,071
Corinto	20	5:00	22	5:40	22	12:49	22	16:45	22	16:45	American	261.0	40.0	13.6	Cristobal, C. Z.	Acahuala, Salvador.	2,352	1,549
Dramatist	21	14:55	22	6:15	22	17:40	22	18:33	22	T. & J. Harrison	410.0	52.3	17.5	Liverpool, England	Vancouver, B. C.	54	6,202	
Jacob	21	14:55	22	6:15	22	17:40	22	18:33	22	T. & J. Harrison	410.0	52.3	17.5	Liverpool, England	Vancouver, B. C.	54	6,202	
Luckenbach.	7	2:20	22	7:45	22	18:12	22	19:18	22	American	434.0	57.7	22.6	New Orleans, La.	Seattle, Wash.	3,046	7,982	
West Cape.	22	13:50	23	00:35	23	9:42	23	10:45	23	American	409.5	54.0	18.0	Philadelphia, Pa.	General	3,244	6,566	
West Notis.	22	21:05	23	6:15	23	15:36	23	16:35	23	American	410.0	54.3	19.1	Buenos Aires, Arg.	General	3,067	6,383	
Mobile City.	23	1:45	23	7:00	23	15:59	23	17:00	23	American	395.0	55.0	21.6	Baltimore, Md	General	5,164	7,330	
City of	23	1:45	23	7:00	23	15:59	23	17:00	23	American	395.0	55.0	21.6	Baltimore, Md	Steel, general	5,164	7,330	
Roubax.	23	5:40	23	8:00	23	17:00	23	18:15	23	American	456.0	58.0	25.0	New York, N. Y.	General	3,759	9,037	
Betterton ¹ .	23	11:35	23	15:05	24	9:34	24	10:49	24	American	431.0	59.2	21.8	New York, N. Y.	Ballast	7,863	5,104	
Australia ¹ .	23	11:45	24	6:25	24	15:37	24	17:00	24	American	509.7	70.3	24.2	Pt. Arthur, Texas.	Ballast	2,562	12,514	
El Salvador.	22	17:20	24	7:15	24	16:42	25	00:37	25	American	360.2	51.6	23.5	New York, N. Y.	Kerosene	2,314	5,710	
Henderson ¹ .	23	12:40	24	8:05	24	17:38	26	4:28	26	American	483.10	61.7	21.0	Hampton Bds, Va.	General	760	1,011	
Lasbek.	23	15:45	24	9:10	24	18:10	24	19:10	24	German	281.7	44.0	16.0	Charleston, S. C.	General	1,950	2,571	
Canadian	23	15:45	24	9:10	24	18:10	24	19:10	24	German	281.7	44.0	16.0	Charleston, S. C.	Salt.	1,950	2,571	
Importer.	24	6:40	24	9:05	24	18:38	24	19:55	24	British	400.0	52.0	16.6	St. Johns, N. B.	General	955	5,891	
Nicoline	24	6:40	24	9:05	24	18:38	24	19:55	24	British	400.0	52.0	16.6	St. Johns, N. B.	General	955	5,891	
Maersk ² .	24	6:45	24	9:50	24	19:09	24	20:21	24	Danish	374.8	52.2	22.6	Chester, Pa.	General	4,625	5,928	
Atlantic ² .	24	9:00	24	10:45	24	19:33	25	1:20	25	Norwegian	441.0	57.0	16.0	Dublin, Ireland	Ballast	3,958	4,483	
Lochgil ² .	23	16:45	25	00:15	25	10:56	25	13:05	25	British	485.0	62.3	23.5	Rotterdam, Holld	General	3,672	10,803	
St. Michel ¹ .	23	17:50	25	1:50	25	11:50	25	13:05	25	American	436.9	58.0	25.2	Brooklyn, N. Y.	General	581	7,606	
Taranger ¹ .	23	22:15	25	3:35	25	13:11	25	15:25	25	Norwegian	398.1	54.8	19.10	Buenos Aires, Arg.	General	3,840	6,858	
San Bernardino.	24	1:30	25	5:00	25	14:15	25	15:30	25	American	410.5	54.2	18.6	New York, N. Y.	Corn, coffee, etc.	3,094	6,755	
Texmar.	24	12:10	25	10:15	25	18:46	25	19:51	25	American	410.5	54.2	18.6	Baltimore, Md	General	7,264	6,567	
Montanan.	24	16:40	25	10:45	25	19:00	25	19:55	25	American	404.6	53.9	17.7	Baltimore, Md	General, steel	2,641	6,756	
Dorothy	24	16:40	25	10:45	25	19:00	25	19:55	25	American	404.6	53.9	17.7	Baltimore, Md	General	2,641	6,756	
Luckenbach.	25	1:40	25	12:00	25	19:50	25	20:50	25	American	448.9	60.2	22.0	Boston, Mass	General	3,900	9,294	
Kmai Maru ² .	25	8:10	25	13:00	25	20:10	25	21:05	25	Japanese	446.0	60.5	22.6	New York, N. Y.	General, tobacco.	3,953	8,982	
Peterson.	25	14:10	25	14:20	25	21:55	25	23:05	25	British	400.1	52.4	15.6	Newcastle, Eng.	Ballast	5,885	4,144	
Baral.	23	23:55	25	14:25	25	22:00	25	23:05	25	Dutch	202.0	32.0	12.6	Cristobal, C. Z.	General	161	1,187	
India.	23	23:55	25	14:25	25	22:00	25	23:05	25	French	418.0	56.0	20.3	Hayes, France	General	1,164	1,757	
Indiana.	23	23:55	25	14:25	25	22:00	25	23:05	25	French	418.0	56.0	20.3	Hayes, France	General	1,164	1,757	
Esparita.	24	17:50	26	6:00	26	13:38	26	14:30	26	American	330.4	40.0	19.6	Hanover, Germany	General	1,333	3,683	
Ansgir.	25	15:30	26	6:10	26	13:31	26	15:25	26	German	393.0	40.0	19.6	Hanover, Germany	General	1,333	3,683	
Huacana.	25	17:10	26	7:20	26	15:27	26	16:26	26	American	424.0	53.2	19.6	New York, N. Y.	General	1,903	6,542	
Sweland ¹ .	25	7:35	26	8:20	26	16:19	26	20:46	26	Swedish	561.0	72.2	22.6	Sparrows Pt., Md.	Ballast	7,304	5,099	
Chatanooga	25	7:35	26	8:20	26	16:19	26	20:46	26	Swedish	561.0	72.2	22.6	Sparrows Pt., Md.	Ballast	7,304	5,099	
City.	26	7:00	26	9:15	26	17:23	26	18:41	26	American	424.0	56.0	22.6	Baltimore, Md	General	7,469	7,611	
Tanker.	26	7:00	26	9:15	26	17:23	26	18:41	26	American	424.0	56.0	22.6	Baltimore, Md	General	7,469	7,611	

¹ Tanker. ² Motor ship. ³ Transport.

Manizales	19	20	40	26	18	20	26	19	30	German	Roland Line	216.5	33.0	13.3	Cristobal, C. Z.	Guayaquil, Ecuador ¹	70	1,132	741
Singapore	26	16	30	26	18	30	27	9	26	27	10	29	19	19	Norfolk, Va.	Kobe, Japan	3,401	5,914	4,426
Narra-gansett ¹	27	8	55	27	11	45	27	18	58	27	90	00	19	6	Barrow, England	Los Angeles, Calif	7,020	5,051	5,051
Caldus ²	25	12	20	27	11	25	27	20	46	28	00	12	8	0	Cristobal, C. Z.	Buenaventura, Col.	75	211	124
Murcier	27	10	25	27	13	10	27	30	44	27	22	02	60	9	Dunkirk, France	Vancouver, B. C.	8,771	6,282	6,282
Washington ³	27	2	10	27	13	35	27	21	41	27	22	40	61	2	General	Vancouver, B. C.	1,510	10,332	7,475
Mandinga ⁴	27	15	05	28	2	10	28	13	50	28	11	28	62	0	Towing barges	Gatun, C. Z.	8	8	8
Orcuna	27	13	05	28	3	15	28	10	33	28	11	28	62	0	General	Talcahuano, Chile	1,573	12,417	8,305
Orazio ⁵	26	13	05	28	3	15	28	10	33	28	11	28	62	0	General	Talcahuano, Chile	1,641	12,977	9,373
Santa Inez ²	27	23	55	28	5	50	28	13	55	28	18	40	53	2	General	Valparaiso, Chile	2,551	6,255	4,016
Sheaf Crown	27	16	45	28	6	40	28	15	02	29	1	35	54	6	Coal and coke	New Caledonia	6,619	7,128	5,506
Nelson	27	22	50	28	7	00	28	15	55	28	16	57	53	1	General	Seattle, Wash.	2,448	5,657	4,133
Traveler	28	11	50	28	12	05	28	19	25	28	23	00	62	3	Gen., explosives	Wellington, N. Z.	2,704	11,170	8,208
Port Hunter	27	17	35	28	12	50	28	20	15	28	21	30	60	6	Gen., bananas	Vancouver, B. C.	1,158	9,633	6,998
Exportor ²	28	15	00	28	19	40	29	9	10	29	10	25	54	0	Ballast	Portland, Ore	6,626	4,977	4,977
Taijen Maru	28	15	40	28	20	30	29	9	55	29	11	04	66	0	Ballast	Los Angeles, Calif	9,734	6,349	6,349
Tidewater ²	28	15	40	28	20	30	29	9	55	29	11	04	66	0	Ballast	Los Angeles, Calif	9,734	6,349	6,349
Navy Motor	28	15	40	28	20	30	29	9	55	29	11	04	66	0	Ballast	Los Angeles, Calif	9,734	6,349	6,349
Sailor	28	15	40	28	20	30	29	9	55	29	11	04	66	0	Ballast	Los Angeles, Calif	9,734	6,349	6,349
No. 1	28	15	40	28	20	30	29	9	55	29	11	04	66	0	Ballast	Los Angeles, Calif	9,734	6,349	6,349
No. 2	28	15	40	28	20	30	29	9	55	29	11	04	66	0	Ballast	Los Angeles, Calif	9,734	6,349	6,349
No. 3	28	15	40	28	20	30	29	9	55	29	11	04	66	0	Ballast	Los Angeles, Calif	9,734	6,349	6,349
No. 4	28	15	40	28	20	30	29	9	55	29	11	04	66	0	Ballast	Los Angeles, Calif	9,734	6,349	6,349
No. 5	28	15	40	28	20	30	29	9	55	29	11	04	66	0	Ballast	Los Angeles, Calif	9,734	6,349	6,349
No. 6	28	15	40	28	20	30	29	9	55	29	11	04	66	0	Ballast	Los Angeles, Calif	9,734	6,349	6,349
No. 7	28	15	40	28	20	30	29	9	55	29	11	04	66	0	Ballast	Los Angeles, Calif	9,734	6,349	6,349

1 Tanker. 4 Laundri. 5 Towing Sea Scout fleet.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

New Mexico ⁶	22	7	57	22	14	20	22	15	55	American	U. S. Navy	624	96	0	Balboa, C. Z.	Cristobal, C. Z.	6,363	10,405	7,401
Bridge ⁷	22	8	25	22	15	55	26	6	20	American	U. S. Navy	400	55	2	Balboa, C. Z.	Cristobal, C. Z.	6,363	10,405	7,401
Langley ⁸	22	9	08	22	16	35	26	6	20	American	U. S. Navy	520	65	2	Balboa, C. Z.	Cristobal, C. Z.	6,363	10,405	7,401
Brazos ⁹	22	9	28	22	17	45	25	23	40	American	U. S. Navy	475	56	0	Balboa, C. Z.	Cristobal, C. Z.	6,363	10,405	7,401
Trojan Star	21	16	45	22	10	07	22	18	30	British	Blue Star Line	493	61	6	N. Westm ^{er} , B. C.	Hamburg, Germany	6,363	10,405	7,401
No. 145 ⁹	22	10	36	22	19	35	26	5	55	American	U. S. Navy	415	55	6	Balboa, C. Z.	Cristobal, C. Z.	6,363	10,405	7,401
No. 142 ⁹	22	10	36	22	19	35	26	5	55	American	U. S. Navy	415	55	6	Balboa, C. Z.	Cristobal, C. Z.	6,363	10,405	7,401
No. 143 ⁹	22	10	48	22	20	30	26	5	55	American	U. S. Navy	415	55	6	Balboa, C. Z.	Cristobal, C. Z.	6,363	10,405	7,401
No. 144 ⁹	22	10	48	22	20	30	26	5	55	American	U. S. Navy	415	55	6	Balboa, C. Z.	Cristobal, C. Z.	6,363	10,405	7,401
Peter Kerr	21	20	15	22	11	00	22	20	30	American	States S. S. Co.	415	55	6	Portland, Ore	London, England	8,452	7,704	5,606
San Marcos	21	22	30	22	12	25	23	00	10	American	Quaker Line	410	54	0	Cos Bay, Ore	Wilmington, Del.	7,166	4,895	4,895
Giulia ¹⁰	21	17	15	22	12	25	23	00	10	Norwegian	Canadian Transp. Co.	360	51	0	Vancouver, B. C.	London, England	5,674	5,101	3,785
Jacob Jones	22	12	14	22	21	30	26	5	55	American	U. S. Navy	360	51	0	Vancouver, B. C.	London, England	5,674	5,101	3,785
No. 130 ⁹	22	13	38	22	23	30	25	11	20	American	U. S. Navy	360	51	0	Vancouver, B. C.	London, England	5,674	5,101	3,785
No. 347 ⁹	22	13	38	22	23	30	25	11	20	American	U. S. Navy	360	51	0	Vancouver, B. C.	London, England	5,674	5,101	3,785
No. 210 ⁹	22	13	52	22	23	45	26	5	55	American	U. S. Navy	360	51	0	Vancouver, B. C.	London, England	5,674	5,101	3,785
No. 211 ⁹	22	13	52	22	23	45	26	5	55	American	U. S. Navy	360	51	0	Vancouver, B. C.	London, England	5,674	5,101	3,785
No. 346 ⁹	22	13	52	22	23	45	26	5	55	American	U. S. Navy	360	51	0	Vancouver, B. C.	London, England	5,674	5,101	3,785

10 Motor ship.

8 Destroyer.

7 Store ship.

6 Battleship.

5 Airplane carrier.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Jersey City	22	8.00	22	14.06	23	1.45	23	3.10	British.	Sir W. R. Smith & Sons	411.8	55.0	23.0	Vancouver, B. C.	London, England.	General.	8,989	6,952	5,005
Ronoke	22	14.15	22	15.04	23	4.40	23	4.40	American.	The Texas Co.	416.8	56.1	25.3	Los Angeles, Calif.	Wilmington, N. C.	Gasoline.	8,485	6,931	4,989
Whitney	22	16.37	22	16.37	23	6.10	23	6.01	American.	U. S. Navy	483.0	61.0		Balboa, C. Z.	Cristobal, C. Z.				
Saratoga	23	5.08	23	17.10	23	17.10	23	11.50	American.	U. S. Navy	575.0	107.9		Balboa, C. Z.	Cristobal, C. Z.				
Trenton	23	6.20	23	20.35	25	14.55	25	14.55	American.	U. S. Navy	590.0	55.0		Balboa, C. Z.	Cristobal, C. Z.				
Northampton	23	7.18	23	21.45	25	11.20	25	11.20	American.	U. S. Navy	555.0	56.0		Balboa, C. Z.	Cristobal, C. Z.				
Marblehead	23	8.10	23	23.00	26	5.55	26	5.55	American.	U. S. Navy	550.0	55.0		Balboa, C. Z.	Cristobal, C. Z.				
Concord	23	8.42	23	23.40	25	3.20	25	3.20	American.	U. S. Navy	555.0	55.0		Balboa, C. Z.	Cristobal, C. Z.				
N-2	23	9.47	23	23.40	25	3.20	25	3.20	American.	U. S. Navy	555.0	55.0		Balboa, C. Z.	Cristobal, C. Z.				
N-2	23	15.30	23	10.02	24	3.20	24	3.20	British.	Sisw, Savill & Albion.	482.6	64.3		Wellington, N. Z.	London, England.	General.	6,478	11,819	8,366
Coptic	23	15.30	23	10.02	24	3.20	24	3.20	British.	Sisw, Savill & Albion.	482.6	64.3		Wellington, N. Z.	London, England.	General.	6,478	11,819	8,366
Scottish	23	15.30	23	10.02	24	3.20	24	3.20	British.	Sisw, Savill & Albion.	482.6	64.3		Wellington, N. Z.	London, England.	General.	6,478	11,819	8,366
Borderer	22	22.45	23	10.37	24	4.55	24	6.50	British.	Anglo-Saxon Pet. Co.	428.0	56.0	26.0	Los Angeles, Calif.	Lands End, Eng. ¹⁹	Kerosene.	8,610	7,149	4,927
Barat	23	6.50	23	10.50	23	23.55	25	14.25	Dutch.	Royal Neth. S. S. Co.	202.9	33.1	11.3	Buenaventura, Col.	Cristobal, C. Z.	(*)	240	1,182	742
Willmote	23	13.45	23	14.26	24	6.20	24	6.20	American.	Dixon S. S. Corp.	390.2	54.2	27.0	Seattle, Wash.	Norfolk, Va.	Lumber, general.	7,055	6,162	4,433
Canadian	23	10.40	23	14.47	24	7.50	24	7.50	British.	Can. Nat. Steamships	400.0	52.4	15.0	Auckland, N. Z.	Halfax, N. S.	General.	819	6,228	4,491
Transporter.	24	5.20	24	16.55	25	14.55	25	14.55	American.	U. S. Navy	875.0	107.9		Balboa, C. Z.	Cristobal, C. Z.				
Lexington	24	6.15	25	9.10	25	18.30	25	18.30	American.	U. S. Navy	582.0	64.1		Balboa, C. Z.	Cristobal, C. Z.				
Northampton	24	7.16	24	18.30	26	6.20	26	6.20	American.	U. S. Navy	554.0	93.2		Balboa, C. Z.	Cristobal, C. Z.				
Arkansas	24	8.43	25	9.50	25	17.40	25	17.40	American.	U. S. Navy	570.0	65.2		Balboa, C. Z.	Cristobal, C. Z.				
Salt Lake City	24	8.43	25	9.50	25	17.40	25	17.40	American.	U. S. Navy	570.0	65.2		Balboa, C. Z.	Cristobal, C. Z.				
Bobolink	24	8.37	24	17.40	25	17.40	25	17.40	American.	U. S. Navy	180.0	35.6		Balboa, C. Z.	Cristobal, C. Z.				
No. 20	23	17.10	24	9.62	24	17.58	26	6.00	American.	United Fruit Co.	330.6	44.6	21.0	San Francisco, Cal.	Cristobal, C. Z.	General.	1,376	3,683	2,373
Esparta	24	8.37	24	17.40	25	17.40	25	17.40	American.	U. S. Navy	180.0	35.6		Balboa, C. Z.	Cristobal, C. Z.				
Gen. Wm. M. Graham	24	9.10	24	17.50	25	17.50	25	17.50	American.	U. S. Army	156.0	32.0		Balboa, C. Z.	Cristobal, C. Z.				
Texas	24	3.00	24	9.15	24	19.30	24	19.30	American.	Amer.-Hawaiian Line	471.0	57.2	23.0	Balboa, C. Z.	Boston, Mass.	Lumber, general.	9,397	9,154	6,906
Pensacola	24	9.59	25	10.25	25	17.55	25	17.55	American.	U. S. Navy	570.0	65.2		Balboa, C. Z.	Cristobal, C. Z.				
F. J.	24	4.30	24	10.29	24	20.40	24	20.40	American.	Luckenbach Line	446.0	56.1	26.0	Seattle, Wash.	Mobile, Ala.	General.	4,978	8,508	6,179
Luckenbach.	24	9.45	24	10.46	24	21.25	24	22.15	Norwegian.	Inter-Freighting Corp.	376.5	53.8	24.0	Teopipala, Chile.	Norfolk, Va.	Nitrates	7,350	6,256	4,663
Slemmesdal	24	10.46	24	20.40	25	11.30	25	11.30	American.	U. S. Navy	188.0	35.4		Balboa, C. Z.	Cristobal, C. Z.				
Robin No. 3	24	11.00	24	22.24	25	22.24	25	22.24	British.	Anglo-Panad. Oil Co.	407.4	52.2	26.2	La Libertad, Ecu.	Philadelphia, Pa.	Crude oil.	7,989	6,046	4,326
El Cervo	24	7.00	24	12.09	24	23.20	24	23.20	American.	Weyerhaeuser Tim. Co.	440.0	56.0	27.0	Everett, Wash.	Newark, N. J.	Lumber.	9,000	8,312	6,087
Hedron	24	11.00	24	12.33	25	00.05	25	00.05	American.	Luckenbach Line	445.0	58.0	27.0	Portland, Ore.	Boston, Mass.	Lumber, general.	9,483	8,695	6,375
Robert	24	12.50	24	13.35	25	1.35	25	1.35	American.	Standard Transp. Co.	468.3	62.7	29.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	11,268	9,744	7,140
Dixie Arrow	24	15.55	25	18.40	25	18.40	25	18.40	American.	The Texas Co.	416.8	56.1	27.0	Wilmington, Del.	Wilmington, Del.	Gasoline.	8,253	6,756	4,844
Pensylvania	25	00.33	25	6.54	25	20.30	25	20.30	American.	Sun Oil Co.	480.6	66.0	29.0	Los Angeles, Calif.	Chester, Pa.	Gasoline.	13,487	9,620	6,476
Sun	25	00.33	25	6.54	25	20.30	25	20.30	American.	Sun Oil Co.	480.6	66.0	29.0	Los Angeles, Calif.	Chester, Pa.	Gasoline.	13,487	9,620	6,476

¹⁹ Destroyer tender. ²⁰ Coffee, cocoa, and bals.

²¹ For orders.

²² Tanker.

²³ Submarine.

²⁴ Motor ship.

²⁵ Battleship.

²⁶ Mine sweeper.

²⁷ Mine planter.

Happy Days 15 21	24	19.45	25	7.05	25	22.02	26	8.25	American	181.1	27.1	11.0	Los Angeles, Calif.	Habana, Cuba.	Ballast	563	244
Kefuku Maru.	24	20.00	25	8.04	25	21.50	25	23.50	Japanese	385.0	51.0	27.0	East coast, U.S.A.	Houston, Texas	Sugar, hump	7,744	4,670
Yomachichi 15	25	1.00	25	9.50	25	22.30	25	22.30	American	402.0	54.0	26.0	Balboa, C. Z.	Balboa	General	6,213	6,996
Poseidon	25	1.10	25	10.25	25	23.45	25	22.40	German	450.8	57.2	26.0	Corral, Chile.	Hamburg, Germany	General	8,716	5,294
Orbita	24	21.05	25	11.51	26	1.20	26	1.20	British	550.3	67.3	27.0	Talcahuano, Chile.	Liverpool, England	(21)	7,030	16,844
Tai Ping 15	25	8.30	25	12.14	26	2.35	26	2.35	Norwegian	461.9	60.6	25.0	Davao, P. I.	New York, N. Y.	General	5,893	9,894
Portmar	25	8.30	25	12.14	26	2.35	26	2.35	American	409.8	54.2	25.0	Seattle, Wash.	New York, N. Y.	Pulp, lumber	7,427	7,979
Pacific Trader 15	25	2.40	25	12.40	26	4.05	26	4.05	British	420.0	53.7	26.2	Vancouver, B. C.	London, England	General	6,382	7,979
Medavia 15	25	10.00	25	13.06	26	6.15	26	6.15	British	387.0	48.7	23.0	Vancouver, B. C.	London, England	Fruit, general	5,563	6,719
Encador	25	13.35	26	6.23	26	15.05	27	9.25	American	380.6	48.7	23.0	San Francisco, Cal.	New York, N. Y.	General, coffee	3,118	5,928
Nosa King	25	22.58	26	6.55	26	15.50	26	18.40	American	324.0	46.2	21.3	San Antonio, Chile.	New Orleans, La.	Beans, nitrates	4,073	3,978
Intrepid 15 21	25	7.00	26	7.00	26	14.45	26	14.45	American	167.0	34.0	17.0	Balboa, C. Z.	East coast, U.S.A.	General	1,393	2,874
Guayaquil	20	4.35	26	7.34	26	16.45	26	22.00	American	251.0	43.6	17.0	Guayaquil, Ecuador	New York, N. Y.	General	1,393	2,874
Charles R.	26	7.00	26	8.04	26	16.45	26	16.45	American	401.4	53.2	26.0	Puget Isl., Wash.	Baltimore, Md.	Lumber, general	7,250	7,082
McCormick	26	7.50	26	9.12	26	18.35	26	18.35	American	409.8	54.2	24.1	Seattle, Wash.	Boston, Mass.	Lumber, general	8,425	6,602
Sage Brush	20	1.50	26	9.45	26	17.40	26	17.40	British	215.7	33.6	14.0	Champerico, Guat.	Cristobal, C. Z.	General	221	1,273
Acapiya	26	9.30	26	10.35	26	18.50	26	18.50	British	227.5	32.4	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	General	434	1,632
Durazzo	26	20.15	27	6.00	27	18.35	27	18.35	German	561.0	72.0	34.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	21,650	15,560
Amerikaland 15	26	20.35	27	6.35	27	20.30	27	22.40	Swedish	476.6	63.1	26.0	Auckland, N. Z.	London, England	Prozen, general	5,272	10,973
Hermulus	27	00.30	27	7.20	27	21.40	28	14.15	French	431.1	57.2	25.0	Portland, Oreg.	Le Havre, France.	General	6,625	7,768
San Francisco	27	7.40	27	8.21	27	22.00	27	22.00	American	404.6	53.9	27.0	Pt. Townsend, Wash.	Boston, Mass.	General	6,115	6,766
Hawaiian	27	7.40	27	8.21	27	22.00	27	22.00	American	392.0	52.6	26.0	Vancouver, B. C.	Stockholm, Sweden	(24)	5,873	6,650
Annie	27	6.35	27	9.12	27	19.15	27	21.25	Swedish	386.8	52.2	16.1	Vancouver, Calif.	New Orleans, La.	(25)	2,084	5,708
Johnson 15	27	8.10	27	14.10	27	22.55	27	23.30	American	303.0	43.0	20.0	Los Angeles, Calif.	New York, N. Y.	Copper ore	2,997	2,844
Dio	27	17.10	27	17.51	28	2.25	28	13.15	British	470.0	63.2	28.0	Tocopilla, Chile	Halifax, N. S.	Crude oil	11,801	9,191
Alvarado	28	3.00	28	6.27	28	18.15	28	21.55	British	356.0	51.6	26.0	Talara, Peru	Poughkeepsie, N. Y.	Lumber	5,400	5,367
Henry D.	28	3.00	28	6.27	28	18.15	28	21.55	British	399.5	53.0	27.0	Antofagasta, Chile.	Mobile, Ala.	Nitrates	8,000	6,199
Whiton	28	5.30	28	8.15	28	19.20	28	19.20	Norwegian	410.5	54.3	23.0	Vancouver, B. C.	Buenos Aires, Arg.	Lumber, general	4,864	6,581
Eir	28	12.15	28	13.15	28	20.45	28	20.45	American	356.0	51.6	26.0	Balboa, C. Z.	Cristobal, C. Z.	Ballast	5,400	5,367
West Nilus	28	12.15	28	13.15	28	20.45	28	20.45	Panamanian	356.0	51.6	26.0	Balboa, C. Z.	Cristobal, C. Z.	Ballast	5,400	5,367
Hull 21	28		28		28												

* DEPARTURES.

* ARRIVALS.

PORT OF CRISTOBAL

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
March 22	Calamares	United Fruit Co.	Port Limon, Costa Rica.	March 22	No. 9688 27.	Pan American Airways	San Salvador and waypts.
March 22	Kungsbohn	Swedish-American Line	New York via wayports.	March 22	No. 666-M 27.	Pan American Airways	Miami via wayports.
March 22	Camden	United Fruit Co.	Curacao, D. W. I.	March 22	Magdalena	Hamburg-American Line	Hamburg via wayports.
March 22	Inapaquina	A. Tagaropoulos	Barraquenia, via Panama.	March 22	Calamares	United Fruit Co.	New York via Habana.
March 23	Darien C-35 27.	Santa Airplane Co.	Colon, Rep. of Panama.	March 25	Parismita	United Fruit Co.	New Orleans and waypts.
March 23	Tamaha	Standard Oil Co.	Aruba, D. W. I.	March 25	Inapaquina 26	A. Tagaropoulos	Colon, Rep. of Panama.
March 24	Venezuela	Royal Netherlands S. S. Co.	Amsterdam via wayports.	March 25	Juan Sebastian Blanco	Spanish S. S. Line	Barcelona via wayports.
March 24	Almeria Lykes	Lykes Brothers S. S. Co.	Gaveston, Texas.	March 23.	Camden.	United Fruit Co.	Curacao via Port Limon.

* Other than ships passing through the Canal.

26 Motor boat.

27 Air mail carrier.

28 Lumber, sugar, and general.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.			* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
March 24	No. 144-M ²⁸	Pan American-Grace Airways	Pan Diego via wayports.	March 23	Kungsholm	Swedish-American Line	New York via wayports.
March 24	No. 731-M ²⁸	Theodore Gildred	San Diego via wayports.	March 24	Almeria Lykes	Lykes Brothers S. S. Co.	Galveston and wayports.
March 25	Acon	Panama R. R. S. S. Line	New York via Haiti.	March 25	Tamaha	Standard Oil Co.	Tampico, Mexico.
March 25	Toluca	United Fruit Co.	New York via wayports.	March 25	No. 9664 ²⁸	Pan American Airways	San Salvador and wayp'ts.
March 25	Santa Maria	United Fruit Co.	New York via Kingston.	March 25	No. 668-M ²⁸	Pan American Airways	Miami via wayports.
March 25	No. 670-M ²⁸	Pan American Airways	Miami via wayports.	March 25	Venezuela	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
March 25	No. 9688 ²⁸	Pan American Airways	San Salvador and wayp'ts.	March 26	No. 145-M ²⁸	Pan American Airways	New York via wayports.
March 26	Baracoa	United Fruit Co.	New Orleans and wayp'ts.	March 26	Santa Maria	United Fruit Co.	La Guayra via wayports.
March 26	C-44 ²⁸	Seadta Airplane Co.	New York via wayports.	March 26	Tela	United Fruit Co.	Port Limon, Costa Rica.
March 27	Cayula	Elders & Ryffels Line	Avonmouth via wayports.	March 26	Darwin C-35 ²⁸	Seadta Airplane Co.	Bocas, Rep. of Panama.
March 27	Carmelita ²⁸	Standard Fruit & S. S. Co.	New Orleans via Habana.	March 27	Baracoa	Columbian S. S. Line	Barranquilla via wayp'ts.
March 27	Inapaquina ³⁰	A. Tagaropoulos	Colon, Rep. of Panama.	March 27	Baracoa	A. Tagaropoulos	New York via Kingston.
March 27	Amnetta I. ³⁰	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	March 27	Carmelita ²⁸	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.
March 28	Venezuela	Royal Netherlands S. S. Co.	Colon, Rep. of Panama.	March 28	Amnetta I. ³⁰	A. Tagaropoulos	Colon, Rep. of Panama.
March 28	Tela	United Fruit Co.	Port Limon, Costa Rica.	March 28	Pearl Marie ²⁹	G. I. Bryan.	Colof., Rep. of Panama.
March 28	No. 145-M ²⁸	Pan American Airways	Bocas, Rep. of Panama.	March 28	Tela	United Fruit Co.	Bocas, Rep. of Panama.
March 28	No. 666-M ²⁸	Pan American Airways	La Guayra via wayports.	March 28	Cayula	Standard Fruit & S. S. Co.	New Orleans and wayp'ts.
March 28	No. 9664 ²⁸	Pan American Airways	Miami via wayports.	March 28	Cayula	Elders & Ryffels Line	Avonmouth via Kingston.
March 28	No. 300-N ²⁴	Pan American-Grace Airways	San Salvador and wayp'ts.	March 28	Venezuela	Royal Netherlands S. S. Co.	Avonmouth via wayports.
March 28	No. 300-N ²⁴	Pan American-Grace Airways	Panama via wayports.	March 28	Venezuela	Royal Netherlands S. S. Co.	Amsterdam via wayports.

²⁸ Air mail carrier.

²⁹ Motor schooner.

PORT OF BALBOA.

³⁰ Motor boat.

March 24	Ginyo Maru	Nippon Yusen Kaisha.	Hongkong, China.	March 24	Ginyo Maru	Nippon Yusen Kaisha.	Valparaiso, Chile.
March 24	Supreme ³¹	Van Camp Seafood Co.	Panama Bay, R. P.	March 24	Supreme ³¹	Van Camp Seafood Co.	Panama Bay, R. P.
March 25	Supreme ³¹	Van Camp Seafood Co.	Panama Bay, R. P.	March 25	Supreme ³¹	Van Camp Seafood Co.	Panama Bay, R. P.
March 25	Real ³²	Hans Elliot.	Panama Bay, R. P.	March 25	Real ³²	Hans Elliot.	Panama Bay, R. P.
March 26	Nueva Panama ³¹	Hans Elliot.	Panama Bay, R. P.	March 26	Nueva Panama ³¹	Hans Elliot.	Panama Bay, R. P.
March 26	Supreme ³¹	Van Camp Seafood Co.	Panama Bay, R. P.	March 26	Supreme ³¹	Van Camp Seafood Co.	Panama Bay, R. P.

³¹ Motor ship.

³² Motor schooner.

* Other than ships passing through the Canal.

Visit of Chilean Battleship.

The battleship *Almirante Latorre*, of the Chilean Navy, arrived at Cristobal from Plymouth, England, on March 28, 1931, and transited the Canal on the following day to Balboa where she will be tied up several days before departing for Valparaiso. The vessel, which was recently laid up in England for general overhaul, is 625 feet in length, 92 feet 5 inches beam, and had a salt-water draft at the time of transit of 27 feet 5 inches. She is of 28,000 tons displacement and paid \$14,000 in tolls at the rate of 50 cents per displacement ton. The *Almirante Latorre* is the largest vessel in the Chilean Navy and carries normally a crew of 1,167 officers and men. At this time she has a reduced complement, 530 officers and men.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending March 28, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Corinto.....	Pacific Mail S. S. Co.....		March 22.....		98
Parismina.....	United Fruit Co.....		March 22.....		47
Magdalena.....	Hamburg-American Line.....		March 22.....		1,055
Theodore Roosevelt.....	Fred Olsen Line.....	March 22.....	March 22.....	(¹)	298
Calamarc.....	United Fruit Co.....	March 22.....	March 22.....		14
Camden.....	United Fruit Co.....	March 22.....	March 23.....		(²)
Gisla.....	Canadian Transport Co.....	March 22.....	March 23.....		166
El Salvador.....	Panama Mail S. S. Co.....	March 22.....	March 24.....		133
Juan Sebastian Elcano.....	Spanish S. S. Line.....		March 23.....		353
Tarangor.....	Westfal, Larsen & Co.....	March 23.....	March 24.....	(¹)	128½
Lochgail.....	Pacific Steam Navigation Co.....	March 23.....	March 24.....		233
Baralt.....	Royal Netherlands S. S. Co.....	March 23.....	March 25.....		240
Tamaha.....	Standard Oil Co. of N. Y.....	March 23.....	March 25.....		9,270
San Bernardino.....	Quaker S. S. Line.....	March 24.....	March 25.....		281
Almeria Lykes.....	Lykes Brothers.....	March 24.....	March 25.....		195
Venezuela.....	Royal Netherlands S. S. Co.....	March 24.....	March 25.....		105
Indiana.....	French Line.....	March 24.....	March 26.....		139
Esparta.....	United Fruit Co.....	March 24.....	March 26.....		1,498
Orbita.....	Pacific Steam Navigation Co.....	March 25.....	March 25.....		20
Ansgr.....	North German Lloyd.....	March 25.....	March 26.....		131
Santa Marta.....	United Fruit Co.....	March 25.....	March 26.....		487
Tolosa.....	United Fruit Co.....	March 25.....	March 26.....		389
Ancon.....	Panama R. R. S. S. Line.....	March 25.....	March 25.....		2,601
Caldas.....	National Navigation Co.....	March 25.....	March 27.....	(¹)	77
Manizales.....	North German Lloyd.....		March 26.....		64
Guayaquil.....	Panama R. R. S. S. Line.....	March 26.....	March 26.....		140
Tela.....	Pacific Mail S. S. Co.....	March 26.....	March 27.....		821
Baracoa.....	United Fruit Co.....	March 26.....	March 26.....		556
Durazzo.....	United Fruit Co.....	March 26.....	March 27.....		436
Acajutla.....	Hamburg-American Line.....	March 26.....	March 27.....		434
Orazio.....	Pacific Steam Navigation Co.....	March 26.....	March 27.....		221
Washington.....	Italian S. S. Line.....	March 26.....	March 28.....		233
Oreoma.....	French Line.....	March 27.....	March 27.....		62
Cefalu.....	Pacific Steam Navigation Co.....	March 27.....	March 28.....		77
San Francisco.....	Standard Fruit & S. S. Co.....	March 27.....	March 28.....		70
Santa Inez.....	French Line.....	March 27.....	March 28.....		146
Pacific Exporter.....	Grace Line.....	March 27.....	March 28.....		86
Alvarado.....	Furness, Withy & Co.....	March 27.....	March 28.....	(¹)	506
Tela.....	Pacific Steam Navigation Co.....	March 28.....	March 28.....	(¹)	15
Pearl Marie.....	United Fruit Co.....	March 28.....	March 28.....		129
Venezuela.....	R. Feuillebois.....	March 28.....	March 28.....	(¹)	25
	Royal Netherlands S. S. Co.....	March 28.....	March 28.....	(¹)	792

¹ No cargo discharged.

² No cargo laded.

³ One case.

⁴ One package.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1931 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	From New York to Cristobal.			From Cristobal to New York.		
	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
Cristobal.....	March 31.....	April 5.....	April 8.....	April 12.....	April 15.....	April 20.
Ancon.....	April 14.....	April 19.....	April 22.....	April 26.....	April 29.....	May 4.
Cristobal ¹	April 23.....	May 3.....	May 6.....	May 10.....	May 13.....	May 18.
Ancon.....	May 12.....	May 17.....	May 20.....	May 24.....	May 27.....	June 1.
Cristobal.....	May 26.....	May 31.....	June 3.....	June 7.....	June 10.....	June 15.
Ancon.....	June 9.....	June 14.....	June 17.....	June 21.....	June 24.....	June 29.
Cristobal.....	June 23.....	June 28.....	July 1.....	July 5.....	July 8.....	July 13.
Ancon.....	July 8.....	July 13.....	July 16.....	July 19.....	July 22.....	July 27.
Cristobal.....	July 21.....	July 26.....	July 29.....	August 2.....	August 5.....	August 10.
Ancon.....	August 4.....	August 9.....	August 12.....	August 16.....	August 19.....	August 24.
Cristobal.....	August 18.....	August 23.....	August 26.....	August 31.....	September 3.....	September 8.
Ancon.....	September 1.....	September 6.....	September 9.....	September 13.....	September 16.....	September 21.
Cristobal.....	September 15.....	September 20.....	September 23.....	September 27.....	September 30.....	October 5.
Ancon ²	September 29.....	October 4.....	October 7.....	October 11.....	October 14.....	October 19.
Cristobal.....	October 14.....	October 19.....	October 22.....	October 25.....	October 28.....	November 2.
Ancon.....	October 27.....	November 1.....	November 4.....	November 8.....	November 11.....	November 16.
Cristobal.....	November 10.....	November 15.....	November 18.....	November 22.....	November 25.....	November 30.
Ancon.....	November 24.....	November 29.....	December 2.....	December 6.....	December 9.....	December 14.
Cristobal.....	December 8.....	December 13.....	December 16.....	December 20.....	December 23.....	December 28.
Ancon.....	December 22.....	December 27.....	December 30.....	January 3.....	January 6.....	January 11.

¹ Effective April 28th, steamers sail daylight saving time.

² Due to discontinuance of the daylight saving time, departure of S. S. *Ancon*, September 29, will be at 4 p. m. standard time.

Steamers sail at 4 p. m. from Pier 65, North River, foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., April 8, 1931. No. 36.

Preliminary Designs for Madden Dam Completed.

Preliminary designs for the Madden Dam, prepared by the United States Bureau of Reclamation in consultation with the designing engineer of The Panama Canal, have been completed and a preliminary announcement has been issued to contractors who may be interested in submitting bids. It is expected that the detailed plans and specifications will be completed in time to permit advertising for bids about July 1, 1931.

The Madden Dam, which is to be located on the Chagres River above Alhajuela, is to be constructed to meet the increasing demand for water for lockages and power, and municipal purposes. The main features of construction will consist of the main dam across the Chagres River, the power plant, the left ridge dam, and 13 saddle dams.

The main dam is to be a straight gravity type concrete dam, consisting of an overflow spillway section across the river and of right and left abutment sections. These three sections will be similar in design except for the special requirements of the spillway section. The toe of the spillway section will be extended approximately 120 feet to form a concrete apron at the downstream end of which a dentated sill will be provided. The dam will be built in sections about 56 feet in length, so formed at the ends as to key together. The maximum height of the dam from the lowest point of the foundation to the top of roadway will be about 220 feet. A sluiced clay blanket will be placed on the stripped bedrock for almost the full width of the spillway section and for a distance of 150 feet upstream. Concrete aprons will be placed on the bedrock immediately upstream from the abutment sections, these varying in length from 150 feet, where they join the clay blanket, to 20 feet at the ends of the abutments.

The spillway will be divided into four openings by three piers, and structural steel drum gates 18 feet by 100 feet long will be installed on the concrete crests in these openings. The bridge over the spillway will consist of flat concrete arches spanning the gate openings. Outlets through the dam will consist of six openings formed in the lower part of the spillway section, and of two plate steel discharge pipes installed in the abutment section at the power plant location. These latter will be located between and alternatively with the three power penstocks. Each opening through the spillway section will be controlled by two hydraulically operated slide gates arranged in tandem. The flow through each of the discharge pipes in the abutment section will be regulated by an 84-inch needle valve installed in the power house at the outlet end. The inlets of all conduits through the dam including power penstocks will be protected by concrete and structural steel trash racks.

A hydroelectric power plant, 100 feet by 45 feet, is to be constructed immediately downstream from the river end of the left abutment section, the substructure of which will be monolithic with the concrete in the dam. The power plant will consist of three units, each of about 8,000 kilowatts capacity. Only two units will be installed with the construction of the dam. The third may be installed later, when needed.

The left ridge dam and the saddle dams will consist of earth and gravel, and rock fills. The upstream face of the left ridge dam will be protected by concrete paving, and the Madden Road will be carried on its crown and then over the main dam. Two of the larger saddle dams will have a concrete core wall and their upstream face will be protected by igneous rock riprap.

Tanker Traffic Through the Panama Canal in March, 1931.

During the month of March, 1931, 65 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 361,940, on which tolls of \$312,473.78 were paid. Cargo amounted to 302,793 tons, which included 295,043 tons of mineral oils and 7,750 tons of molasses.

In point of net tonnage, tanker traffic decreased 18.5 per cent in comparison with the tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 29.6 per cent.

Tank ships comprised 14.8 per cent of the total commercial transits through the Canal during the month; made up 16.4 per cent of the total Panama Canal net tonnage; were the source of 15.9 per cent of the tolls collected; and carried 15.8 per cent of the total cargo through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of March, 1931, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for March, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	6	29,715	\$21,456.96	.....
Danzig.....	1	6,127	4,411.44	.....
French.....	1	5,001	3,609.72	.....
German.....	2	6,508	5,304.53	3,789
Norwegian.....	2	11,083	7,979.76	.....
United States.....	23	134,986	101,609.39	5,593
Total, March, 1931.....	35	193,420	144,362.80	9,382
Total, February, 1931.....	31	173,451	126,407.49	8,327
Total, January, 1931.....	32	178,858	139,549.63	45,185
Total, March, 1930.....	40	209,588	152,605.22	6,907
<i>Pacific to Atlantic.</i>				
British.....	5	26,545	28,083.75	51,077
Danzig.....	2	14,015	13,347.50	24,600
French.....	1	5,050	5,445.00	8,947
German.....	2	6,508	6,182.48	8,767
Norwegian.....	2	10,616	11,305.00	19,793
United States.....	18	105,786	103,747.25	180,227
Total, March, 1931.....	30	168,520	168,110.98	293,411
Total, February, 1931.....	29	160,941	168,039.88	293,328
Total, January, 1931.....	46	244,211	251,904.56	428,081
Total, March, 1930.....	47	234,316	240,982.05	423,247

* Includes 7,750 tons of molasses.

The following tabulation shows the tanker traffic through the Canal during March, 1931, classified according to trade routes:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
United States intercoastal.....	22	126,559	\$92,560.64	3,000
United States to South America.....	1	4,326	3,114.72	.....
United States to Philippine Islands.....	1	8,427	9,048.75	2,593
South American intercoastal.....	1	6,127	4,411.44	.....
Cristobal to United States.....	1	4,459	3,210.48	.....
West Indies to Balboa.....	1	1,934	2,011.25	3,789
Europe to United States.....	7	37,014	26,712.24	.....
Europe to South America.....	1	4,574	3,293.28	.....
<i>Pacific to Atlantic.</i>				
United States intercoastal.....	16	95,433	95,547.50	172,477
United States to West Indies.....	1	6,050	4,356.00	.....
United States to Europe.....	5	24,896	26,363.75	44,368
South America to United States.....	1	4,326	4,633.75	7,939
South America to Canada.....	3	20,877	20,598.75	40,810
South America to Europe.....	2	10,701	11,375.09	20,067
Balboa to West Indies.....	1	1,934	1,392.48	.....
Hawaiian Islands to United States.....	1	4,303	3,843.75	*7,750

* Molasses.

Of the tanker traffic passing through the Canal in March, 1931, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for March, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
March, 1931.....	26	146,574	\$107,033.60	3,000
February, 1931.....	25	137,361	98,899.92	.....
January, 1931.....	22	124,796	95,151.23	18,325
March, 1930.....	31	177,371	127,753.83	.....
<i>From Los Angeles.</i>				
March, 1931.....	20	115,950	115,424.75	199,722
February, 1931.....	23	128,221	134,310.20	239,521
January, 1931.....	33	176,803	183,017.85	310,902
March, 1930.....	40	203,457	208,169.55	364,974

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 1, 1931.

No. 863.

Colombia, north coast, Cartagena, lights extinguished. The master of the French S. S. *Guadeloupe* reports the following lights and buoys extinguished or missing on March 30, 1931:

1. Saimecina Bank Lightship; light extinguished.
2. Boca Chica Entrance, north buoy; light extinguished.
3. Capreya Shoal Light Buoy; missing.
4. Santa Cruz Bank Light Buoy; light extinguished.
5. Castilla Grande Point, southern buoy; missing.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 4, 1931.

No. 865.

Panama, Pacific Coast, Bahia Honda, Penoso Point, shoal reported. The following is quoted from Notice to Mariners No. 13, Washington, D. C., dated March 28, 1931:

The navigating officer of the U. S. S. *Dobbin* reports that an uncharted shoal extends 350 yards 28° from Penoso Point with a depth of 1½ fathoms at low tide at the outer end, falling away rapidly to 6 and 7 fathoms in the direction of Chinche Island. The navigator also reports that there are indications that this shoal extends 250 yards 330° from the 1½ fathom spot mentioned above.

Approximate position: 7° 44' 00" N., 81° 32' 00" W.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, April 4, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam, water draft.		Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Nature.	Tons.				Gross.	Net.		
Durazo.....	26	18.50	29	00.35	29	11.04	29	23.04	British	Hamburg-American Line	277.0	34.0	18.10		Cristobal, C. Z.	Guayaquil, Ecuador	General	209	1,633	1,041
Orari.....	28	17.30	29	2.15	29	11.04	29	20.09	German	N. Z. Shipping Co.	471.0	67.0	25.0		Liverpool, England	Timaru, N. Z.	General	5,648	12,732	8,930
Pacific Pine.....	28	21.10	29	3.40	29	13.05	29	18.15	American	Dimon S. S. Corp.	410.5	54.3	17.0		Philadelphia, Pa.	Tacoma, Wash.	General	2,826	6,583	4,808
Remoura.....	28	17.20	29	5.15	29	13.05	29	18.50	British	N. Z. Shipping Co.	455.0	62.3	27.6		London, England	Bluff, N. Z.	General	3,560	11,911	8,945
Comet.....	28	21.50	29	6.15	29	13.52	29	14.45	American	Standard Oil Co.	480.0	65.0	21.4		New York, N. Y.	Los Angeles, Calif.	Ballast		9,820	6,750
Almirante.....	28	14.25	29	8.00	29	17.00			Chilean	Chilean Government.	625.0	107.0	27.5		Plymouth, Eng.	Valparaiso, Chile	Ballast	3,346	7,380	5,339
Alaskan.....	29	2.00	29	8.40	29	16.43	29	17.45	American	Amer.-Hawaiian Line.	415.0	53.7	19.5		Boston, Mass.	Portland, Ore.	General			
Julus.....	29	6.85	29	10.30	29	17.50			German	Anglo-Saxon Pet. Co.	309.7	45.5	20.0		Curacao, D. W. I.	Balboa, C. Z.	Gas oil	3,789	3,012	1,934
Silverash.....	29	14.20	29	15.15	29	22.35	30	00.37	British	Silver Line.	425.0	58.8	17.9		New York, N. Y.	San Francisco, Cal.	Ballast	2,250	6,190	4,569
Nordbo.....	29	21.00	30	1.00	30	9.38	30	11.00	Danish	Inter. Freightng Co.	380.0	54.0	18.2		New York, N. Y.	Antofagasta, Chile	General	4,680	5,708	4,138
Sobotawan.....	30	00.05	30	6.20	30	14.08	30	22.40	American	Swayne & Hoyt	386.8	52.2	20.5		Houston, Texas	Seattle, Wash.	Pipe, general	6,689	2,873	1,773
Buonaventura.....	30	5.00	30	14.50	30	22.06	30	23.38	American	Panama R. R. S. S. Line	251.0	43.0	17.10		New York, N. Y.	Guayaquil, Ecuador	General	6,083	6,616	4,614
Ipswich.....	30	17.05	30	19.10	31	9.47	31	10.59	American	Argonaut S. S. Line.	400.7	54.2	25.0		Baltimore, Md.	Seattle, Wash.	General	544	5,673	3,592
Toronto.....	30	16.25	30	20.23	31	10.30	31	11.40	Norwegian	Canadian Transp. Co.	380.0	52.0	18.1		Salt City, Utah	Vancouver, B. C.	Ballast			
McHard.....	30	10.15	30	10.15	30	16.63			American	U. S. Navy	180.0	35.6			Cristobal, C. Z.	Balboa, C. Z.	Ballast			
Christenson.....	31	00.25	31	2.55	31	12.00	31	13.20	American	Arrow Line	409.7	54.2	19.6		Baltimore, Md.	Seattle, Wash.	General	4,022	6,698	4,903
Gallic.....	30	13.15	31	6.35	31	14.16	31	15.15	British	White Star Line	450.0	58.0	24.3		Plymouth, England	N. Plymouth, N. Z.	Ballast	1,334	3,387	2,337
San Angelo.....	30	23.50	31	9.35	31	17.00	31	23.05	American	Pac.-Atlantic S. Co.	409.6	54.2	18.0		Wilmington, Del.	Seattle, Wash.	General	3,486	6,310	4,827
Invada.....	23	10.35	31	8.10					British	Robert Buchanan	45.0	11.0	9.6		Brixton, England	New Zealand	Ballast		288	102
El Panquaco.....	31	10.35	31	10.55					Panamanian	Panamanian Govt.	125.0	23.0			Colon, P. F.	Gatun Lake, C. Z.	Ballast			
City of.....	31	12.25	31	13.05	31	20.50	31	22.54	British	Ellerman & Bucknall	400.0	52.0	20.6		New York, N. Y.	Sydney, Australia	General	3,659	6,014	4,383
Svansea.....	30	20.40	31	00.01	31	9.02	31	12.09	German	Hamburg-American Line	309.3	44.1	20.6		Hamburg, Germany	Champerico, Guat.	General	1,830	3,387	2,337
Kreta.....	31	19.40	31	1.15	31	10.08	31	11.20	American	Amer.-Hawaiian Line	434.3	57.7	16.0		Boston, Mass.	Seattle, Wash.	General	1,934	7,953	5,912
Georgian.....	31	23.00	31	2.55	31	11.02	31	11.85	Panamanian	Barber S. S. Line	461.0	60.6	21.6		New York, N. Y.	Shanghai, China	General	3,867	9,570	6,967
Tai Shan.....	1	6.35	1	7.10	1	14.03	1	16.25	British	Cuban Sugar Refin. Co.	425.0	56.0	17.6		Cardenas, Cuba	Los Angeles, Calif.	Sugar	5,000	6,813	4,838
Cape Horn.....	26	17.40	1	9.45	1	17.18	1	18.29	British	Pacific Steam Nav. Co.	215.7	34.0	14.5		Cristobal, C. Z.	Champerico, Guat.	General	470	1,273	706
Acajuta.....	26	17.40	1	9.45	1	17.10	1	18.29	American	U. S. Navy	240.0	21.10			Cristobal, C. Z.	Balboa, C. Z.	Ballast			
S-48.....	1	9.00	1	10.25	1	18.06	1	19.04	American	Luckenbach Line.	446.0	56.0	24.0		Boston, Mass.	Seattle, Wash.	General	4,306	8,552	6,236
K. I.....	1	9.00	1	10.25	1	18.06	1	19.04	American	N. O. & S. A. S. Co.	324.0	46.2	22.3		New Orleans, La.	Talcahuano, Chile	General	3,106	3,983	2,510
Lorenzbach.....	1	11.40	1	11.55	1	19.48	1	20.40	American	Swayne & Hoyt	324.0	46.0	20.6		New Orleans, La.	San Francisco, Cal.	General	3,302	3,951	2,612
Nosa Prince.....	1	11.40	1	11.55	1	19.48	1	20.40	American	Standard Oil Co.	468.3	62.7	22.0		New York, N. Y.	Los Angeles, Calif.	Ballast		9,841	6,946
Point Star.....	1	3.00	1	13.00	1	20.52	1	22.18	American	Standard Oil Co.	468.3	62.7	22.0		New York, N. Y.	Los Angeles, Calif.	Ballast		9,841	6,946
Empire Arrow.....	1	3.00	1	13.00	1	20.52	1	22.18	American	Standard Oil Co.	468.3	62.7	22.0		New York, N. Y.	Los Angeles, Calif.	Ballast		9,841	6,946
Spencer.....	1	19.40	1	2.20	2	9.04	2	10.25	American	Kellogg S. S. Co.	391.8	51.3	20.0		New York, N. Y.	San Francisco, Cal.	Ballast		5,601	3,902

6 Tonnage. 5 Yeacht. 4 Mine sweeper. 3 Battleship. 2 Motor ship. 1 Tanker.

San Mateo.....	31	19.00	2	6.25	2	14.03	3	12.40	American.....	United Fruit Co.....	315.2	44.2	18.0	Cristobal, C. Z.....	San Francisco, Cal.....	Ballast.....	3,495	2,141
Willifaro.....	2	5.20	2	6.35	2	14.37	2	15.45	American.....	Williams S. S. Line.....	386.3	52.2	22.0	Baltimore, Md.....	General.....	3,506	9,081	
Helo.....	31	19.00	2	7.40	2	15.40	3	15.45	Norwegian.....	Panama Mail S. S. Co.....	216.4	34.0	10.0	Cristobal, C. Z.....	Ballast.....	1,182	4,070	
Takooka Maru.....	2	7.30	2	8.35	2	15.03	2	21.05	Japanese.....	Nippon Yusen Kaisha.....	425.0	63.9	23.6	Philadelphia, Pa.....	General.....	4,889	7,989	
Kaifuku.....	2	5.50	2	12.85	2	20.03	2	21.05	Italian.....	Nav. Libera-Triestina.....	543.0	83.9	23.6	Genoa, Italy.....	General.....	653	13,787	
Northern Sun ¹	2	14.20	2	14.30	2	21.38	2	22.30	American.....	Sun Oil Co.....	480.6	63.9	17.0	Clester, Pa.....	General.....	9,761	6,849	
Santa Clara.....	2	5.40	2	15.45	2	22.30	3	18.05	American.....	Grace Line.....	483.3	63.9	25.7	New York, N. Y.....	Ballast.....	2,521	11,080	
E. J. Hooper ⁸	2	.....	2	.....	2	16.49	.....	.....	American.....	E. J. Hooper.....	.....	.....	.....	.....	General.....	3	3
No. 4727 ⁹	2	.....	2	.....	2	16.49	.....	.....	American.....	E. J. Hooper.....	.....	.....	.....	.....	Unknown.....	15	15
Schwarzwald.....	2	12.25	3	1.00	3	9.36	3	10.43	German.....	Hamburg-American Line.....	399.6	54.0	18.3	Cristobal, C. Z.....	Unknown.....	32	32	
Fairfield.....	2	20.30	3	2.20	3	10.15	3	11.26	American.....	Isthmian S. S. Lines.....	309.0	48.2	19.8	Cristobal, C. Z.....	General.....	1,527	6,571	
President.....	3	5.05	3	6.25	3	13.44	3	21.32	American.....	Dollar Line.....	502.0	62.2	26.0	Norfolk, Va.....	General.....	3,504	3,393	
California.....	3	5.10	3	7.00	3	16.00	4	2.20	American.....	Panama-Pacific Line.....	574.4	80.3	26.8	Boston, Mass.....	General.....	3,041	12,023	
Silverwillow ²	3	7.10	3	8.10	3	16.31	3	17.40	Colombian.....	Kerr S. S. Co.....	450.0	61.0	20.0	New York, N. Y.....	General.....	2,871	24,506	
Cauca ²	29	15.35	3	13.45	3	22.15	4	3.10	Colombian.....	National Navigation Co.....	107.0	22.0	10.2	New York, N. Y.....	General.....	3,046	9,311	
New York ¹	3	12.30	3	14.30	3	22.45	3	22.45	American.....	The Texas Co.....	416.0	56.0	20.8	Cristobal, C. Z.....	General.....	253	262	
Swan ¹	3	15.45	3	7.00	3	13.50	4	11.06	Japanese.....	U. S. Navy.....	180.0	51.0	25.6	New York, N. Y.....	Ballast.....	6,775	4,841	
Naples Maru.....	3	15.45	3	20.00	4	9.59	4	11.06	Japanese.....	Kokusai Kisen Kaisha.....	385.0	51.0	25.6	Cristobal, C. Z.....	Ballast.....	7,105	6,207	
Chateau.....	3	12.10	4	1.55	4	9.13	.....	.....	American.....	U. S. Army.....	436.0	58.0	25.3	Jacksonville, Fla.....	Resin, cotton.....	7,105	6,207
Thiery ⁶	3	19.45	4	6.25	4	14.11	4	15.20	American.....	Lukenbach Line.....	425.0	53.7	25.0	New York, N. Y.....	General.....	628	.....
Wind Rush.....	4	6.40	4	7.05	4	14.58	4	16.20	American.....	Shepard S. S. Co.....	409.0	54.0	20.0	Houston, Texas.....	General.....	5,924	7,217	
Goelstzen.....	4	6.35	4	10.10	4	17.47	4	19.00	British.....	Dale & Co.....	440.0	57.5	17.0	Seattle, Wash.....	General.....	4,594	6,558	
Maedhui ⁷	4	13.40	4	15.25	4	22.17	6	9.40	British.....	Burns, Phillips Co.....	341.9	51.0	21.5	Seattle, Wash.....	Ballast.....	7,679	5,848	

¹ Tanker. ² Launch. ³ Barge. ⁴ Motor ship. ⁵ Fresh apples and flour. ⁶ Coffee, beans, and general. ⁷ Lumber, wheat, and general. ⁸ Coffee, hardwood, and drums.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Western Sun ¹⁰	29	00.40	29	6.12	29	15.30	29	15.30	American.....	Sun Oil Co.....	480.6	66.0	29.0	Los Angeles, Calif.....	Gasoline.....	13,151	9,607
Mataroa.....	29	6.15	29	7.00	29	14.55	30	00.15	British.....	Shaw, Savill & Albion.....	500.4	63.2	27.0	London, England.....	Frozen, general.....	3,921	13,590
Cauca ¹⁰	29	4.40	29	7.15	29	15.35	30	00.15	Colombian.....	National Navigation Co.....	107.0	22.9	9.0	Washington, D. C.....	General.....	142	262
Penelope ¹⁰	29	8.20	29	9.04	29	17.15	29	17.15	Danzig.....	W. Tansschiff Rhederei.....	470.1	63.9	27.0	Buenaventura, Col.....	Coffee, general.....	11,300	9,202
Edda.....	29	7.50	29	9.40	29	19.55	29	22.45	Italian.....	General S. S. Corp.....	418.9	53.9	21.0	Talara, Peru.....	Gasoline.....	3,078	6,206
American Star.....	29	20.55	30	5.48	30	14.00	30	14.00	American.....	Charles Nelson & Co.....	386.8	52.2	24.0	Seattle, Wash.....	(*) Lumber, general.....	6,397	5,699
Fella.....	29	21.30	30	7.09	30	15.55	30	21.25	Italian.....	Nav. Libera-Triestina.....	436.6	55.4	26.4	Portland, Ore.....	(*) Lumber, general.....	8,728	7,784
Schwaben.....	30	7.20	30	8.39	30	16.40	31	1.10	German.....	North German Lloyd.....	491.4	63.8	27.0	Vancouver, B. C.....	General.....	11,000	10,002
Nevdan.....	30	7.30	30	9.07	30	19.05	30	19.05	American.....	Amer-Hawaiian Line.....	460.0	57.8	25.0	Vancouver, B. C.....	General.....	7,180	6,829
Santa Maria ¹⁰	30	10.25	30	13.17	30	20.45	31	00.45	American.....	Grace Line.....	466.0	64.0	23.0	Portland, Ore.....	General.....	5,670	10,626
Julius.....	30	15.30	30	16.32	31	1.45	31	3.10	German.....	Julius Schindler.....	309.7	45.5	15.0	Valparaiso, Chile.....	General.....	1,150	3,036
Abona.....	30	11.45	31	6.12	31	15.00	31	16.30	German.....	North German Lloyd.....	295.3	46.8	14.0	Baiba, C. Z.....	Ballast.....	1,150	3,036
Virginia.....	30	20.15	31	6.19	31	15.00	31	16.30	American.....	Panama-Pacific Line.....	426.4	59.2	26.0	Champerico, Guat.....	General.....	6,258	25,254
Atlantic Sun ¹	30	19.40	31	6.19	31	18.00	31	18.00	American.....	Sun Oil Co.....	589.3	80.3	28.0	New York, N. Y.....	(*) Gasoline.....	8,981	7,561
San Mateo.....	30	15.22	31	7.30	31	19.00	2	6.25	American.....	United Fruit Co.....	315.2	44.2	21.0	San Francisco, Cal.....	General.....	1,031	3,496
Helo.....	30	19.40	31	7.42	31	19.00	2	7.40	Norwegian.....	Panama Mail S. S. Co.....	214.2	34.3	12.0	San Francisco, Cal.....	Lumber, general.....	668	1,158
Atago Maru ¹⁰	30	15.30	31	8.52	31	20.00	31	23.10	Japanese.....	Nippon Yusen Kaisha.....	440.2	57.0	27.0	Acajutla, Salvador.....	(*) Lumber, general.....	8,255	8,158

¹⁰ Tanker. ¹¹ Oil, tin, sugar, and general. ¹² Motor ship. ¹³ Fresh apples and flour. ¹⁴ Coffee, beans, and general. ¹⁵ Lumber, wheat, and general. ¹⁶ Coffee, hardwood, and drums.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross. Net.
Lochmonar ¹⁶ .	31	1.30	31	9.02					American.	Royal Mail S. P. Co.	485.6	62.2	30.0	Vancouver, B. C.	Rotterdam, Holl'd.	General.	9,413	10,772	7,581
Katrina	31	8.50	31	9.47	31	20.30	31	20.30	British.	Luckenbach Line.	446.1	56.1	27.2	Los Angeles, Calif.	Boston, Mass.	General.	6,607	8,508	6,179
Luckenbach.	31	11.45	31	12.44	31	21.35	1	1.10	British.	Blue Star Line.	445.2	56.2	26.0	Los Angeles, Calif.	Newcastle, Eng.	General.	4,580	7,517	5,488
Norman Star.	31	23.30	1	6.15	1	18.10	1	22.04	British.	Anglo-Saxon Pet. Co.	427.0	58.3	24.3	Pt. San Luis, Calif.	London, Eng.	Gasoline.	6,827		
Shivan	31	18.25	1	6.23	1	17.25	1	23.10	British.	N. Z. Shipping Co.	452.0	58.0	21.5	Dunedin, N. Z.	London, Eng.	Frozen, general.	3,644	9,079	6,708
Ruapahu	31	22.50	1	7.51	1	18.45	1	20.05	Japanese.	Gardner & Co.	385.0	51.0	27.3	Vancouver, B. C.	Marseilles, France.	Sugar.	7,640	9,911	7,400
Liverpool Maru	1	6.00	1	8.44	1	19.40	1	19.40	Swedish.	Grazeberg Oseosund.	418.8	55.2	28.3	Vancouver, B. C.	London, England.	Wheat, lumber.	8,500	7,265	5,180
Nuolla ¹⁶ .	1	4.30	1	10.13	1	20.30	1	20.30	American.	Isthmian S. S. Lines.	424.2	56.2	26.0	Kahului, T. H.	New York, N. Y.	Sugar.	8,200	7,011	5,460
Bessemer City.	1	4.30	1	10.13	1	20.30	1	20.30	American.	C. W. Meissner.	424.2	56.2	26.0	Kahului, T. H.	Miraflores Lake.	Sugar.	8,200	7,011	5,460
Simba	1	4.30	1	10.13	1	20.30	1	20.30	American.	C. W. Meissner.	424.2	56.2	26.0	Kahului, T. H.	Miraflores Lake.	Sugar.	8,200	7,011	5,460
Courageous ¹⁶ .	31	23.50	1	14.38	1	22.45	2	10.55	American.	Roosevelt S. S. Co.	456.1	56.0	28.0	Mamabig, P. I.	New York, N. Y.	General, sugar.	9,261	8,308	5,850
Canada ¹⁶ .	1	21.30	2	6.03	2	13.50	2	23.45	Swedish.	Johnson Line.	426.9	56.0	26.0	San Francisco, Cal.	Stockholm, Sweden	General.	7,511	7,476	5,485
Miyadono Maru	1	21.55	2	6.59	2	19.57	2	19.55	Japanese.	Tatsuma Kisen Kaisha.	400.0	52.0	26.0	Nasugbu, P. I.	New Orleans, La.	Sugar.	6,800	6,099	4,469
Wilkeno.	2	3.40	2	7.40	2	21.35	2	21.35	American.	Williams S. S. Corp.	415.0	55.7	25.3	Seattle, Wash.	Baltimore, Md.	Lumber, general.	8,866	7,750	5,809
Oregon ¹⁶ .	2	3.55	2	8.42	2	23.00	3	18.15	French.	French Line.	470.3	61.2	26.0	Vancouver, B. C.	Rotterdam, Holl'd.	General.	7,763	10,332	7,469
Ares	2	5.30	2	8.57	2	23.40	3	20.45	Dutch.	Royal Neth. S. S. Co.	340.9	48.2	22.5	Corral, Chile.	Hamburg, Germany	General.	4,000	4,385	3,195
Knute Nelson ¹⁶ .	2	9.50	2	10.50	3	00.35	3	13.30	Norwegian.	Fred Olsen & Co.	435.9	56.2	27.0	Vancouver, B. C.	Oso, Norway	General.	7,900	8,016	5,854
Calli	2	9.10	2	11.39	2	23.30	5	2.25	German.	Roland Line.	216.5	32.9	12.0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	335	1,105	698
Orlando ¹⁶ .	2	9.10	2	11.45	2	23.30	5	2.25	German.	Roland Line.	216.5	32.9	12.0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	335	1,105	698
Virgilio ¹⁶ .	2	4.50	2	12.48	2	21.10	4	11.10	Italian.	N. V. German Lloyd.	48.5	13.5	2.0	Talcahuano, Chile.	Paraiso, C. Z.	Ballast.		32	16
Robin Adair	3	1.00	3	6.36	3	14.50	3	14.50	American.	Isthmian S. S. Lines.	424.8	55.2	25.0	Seattle, Wash.	Genoa, Italy	Lumber, pulp.	1,230	12,941	9,329
Fansley City	3	3.30	3	7.08	3	15.50	3	15.50	American.	Isthmian S. S. Lines.	395.5	55.0	26.1	Tacoma, Wash.	Portland, Me.	Lumber.	7,115	7,470	5,529
Tejon	3	8.55	3	9.53	3	19.30	5	8.20	American.	Union Oil Co.	428.8	58.0	27.0	Los Angeles, Calif.	Baltimore, Md.	Diesel, fuel oils.	7,632	7,330	5,239
Kurama Maru ¹⁶ .	3	9.30	3	10.51	3	19.25	3	21.00	Japanese.	Kokusa Kisen Kaisha.	435.0	58.0	27.0	Manila, P. I.	Boston, Mass.	Sugar, general.	10,029	7,218	4,953
Kentuck	3	12.10	3	13.02	3	20.50	3	22.30	American.	Amer.-Hawaiian Line.	414.5	53.7	27.0	Seattle, Wash.	Boston, Mass.	Sugar, general.	9,459	7,049	4,941
Caldas ¹⁶ .	3	11.00	3	14.22	3	20.52	6	22.30	Colombian.	National Navigation Co.	116.0	21.1	9.0	Buenaventura, Col.	Cristobal, C. Z.	Coffee, platinum.	6,634	3,211	1,124
Sapelo ¹ .	3	18.02	3	18.02	4	3.05	4	7.55	American.	U. S. Navy.	461.6	60.0	30.0	Balboa, C. Z.	Braunton, Texas.	Ballast.	3,710	6,254	4,099
Santa Rita ¹⁶ .	3	14.40	4	6.08	4	14.05	5	1.30	American.	Grace Line.	370.0	53.0	23.0	Valparaiso, Chile.	New York, N. Y.	General.	10,217		
Peena ¹⁶ .	3	23.00	4	7.11	4	15.40	4	22.05	Norwegian.	Anglo-Saxon Pet. Co.	451.1	59.3	27.0	Los Angeles, Calif.	London, Eng.	Gasoline.	6,551	11,588	8,282
Marmilis	4	6.30	4	8.16	4	17.20	4	22.05	British.	Shaw, Savill & Albion.	477.5	63.1	26.0	Auckland, N. Z.	London, England	General.	6,260	5,208	3,578
Hazel Branch.	4	9.40	4	10.39	4	19.50	4	21.05	British.	Nautilus Sea Scouts	400.4	51.2	24.0	Valparaiso, Chile.	Liverpool, England	General.	6,260	5,208	3,578
No. 1									American.	Cristobal Sea Scouts				Balboa, C. Z.	Cristobal, C. Z.	Ballast.			
No. 2									American.	Cristobal Sea Scouts				Balboa, C. Z.	Cristobal, C. Z.	Ballast.			
No. 3									American.	Cristobal Sea Scouts				Balboa, C. Z.	Cristobal, C. Z.	Ballast.			
No. 4									American.	Cristobal Sea Scouts				Balboa, C. Z.	Cristobal, C. Z.	Ballast.			
No. 5									American.	Cristobal Sea Scouts				Balboa, C. Z.	Cristobal, C. Z.	Ballast.			
No. 6									American.	Cristobal Sea Scouts				Balboa, C. Z.	Cristobal, C. Z.	Ballast.			
No. 7									American.	Cristobal Sea Scouts				Balboa, C. Z.	Cristobal, C. Z.	Ballast.			
City of Panama ¹⁶ .	4	12.15	4	19.21	5	2.35			American.	Panama Mail S. S. Co.	296.1	45.9	18.0	San Francisco, Cal.	Pro. Colombia, Col.	General.	1,104	3,848	2,603

¹ Tanker. ¹⁶ Motor ship. ¹⁷ Launch. ¹⁸ Tug. ¹⁹ For orders. ²⁰ Refrigerated fruits and metal. All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.

* DEPARTURES.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
March 29.	Tolosa.	United Fruit Co.	Port Limon, Costa Rica.	March 29.	No. 9888 ²² .	Pan American Airways.	San Salvador and wayp'ts.
March 29.	Cartago.	United Fruit Co.	New Orleans and Habana.	March 29.	No. 670-M ²² .	Pan American Airways.	Miami via wayports.
March 29.	Anahuacuna ²¹ .	United Fruit Co.	Colon, Rep. of Panama.	March 29.	Tolosa.	United Fruit Co.	New York via Habana.
March 31.	Darien C-35 ²¹ .	Scandia Airplane Co.	Barranquilla and wayp'ts.	March 29.	Ancon.	Panama R. R. S. S. Line.	New York via Haiti.
March 31.	Daytonian.	French Line.	St. Nazaire and wayp'ts.	March 29.	Anahuacuna ²¹ .	United Fruit Co.	Colon, Rep. of Panama.
March 31.	No. 144-M ²¹ .	Leyland S. S. Line.	Jiverpool via wayports.	March 30.	Cartago.	United Fruit Co.	New Orleans and wayp'ts.
April 1.	Pastores.	Pan American-Grace Airways.	Pimental via wayports.	April 1.	No. 9654 ²² .	Pan American Airways.	San Salvador and wayp'ts.
April 1.	Irona.	United Fruit Co.	New York via Habana.	April 1.	No. 692-M ²² .	Pan American Airways.	Miami via wayports.
April 1.	Metapan.	United Fruit Co.	New Orleans, La.	April 1.	Guadeloupe.	French Line.	Havre via wayports.
April 1.	No. 9888 ²² .	Pan American Airways.	New York via Kingston.	April 1.	Leyland S. S. Line.	Pan American Airways.	Managua, Nicaragua.
April 1.	No. 668-M ²² .	Pan American Airways.	San Salvador and wayp'ts.	April 1.	Pastores.	Leyland S. S. Line.	Santa Cruz del Sur, Cuba.
April 2.	Bogota.	Colombian S. S. Line.	Miami via wayports.	April 1.	United Fruit Co.	United Fruit Co.	Port Limon, Costa Rica.
April 3.	Contessa.	Standard Fruit & S. S. Co.	New York via wayports.	April 2.	Irona.	United Fruit Co.	Port Limon, Costa Rica.
April 3.	Swiftscout.	Arrow Oil Co.	New Orleans and Habana.	April 2.	No. 394-N ²² .	Pan American Airways.	La Guayra via wayports.
April 3.	Gabeta.	Hamburg-American Line.	Curacao, D. W. I.	April 2.	Metapan.	United Fruit Co.	New York via Kingston.
April 3.	Annetta I. ²¹ .	P. W. Hamilton.	Tampico via wayports.	April 3.	Bogota.	Colombian S. S. Line.	New York via Kingston.
April 3.	Carmelita ²¹ .	United Fruit Co.	Colon, Rep. of Panama.	April 3.	Darien C-35 ²² .	Scandia Airplane Co.	Barranquilla and wayp'ts.
April 4.	Reliance.	Standard Fruit & S. S. Co.	Port Limon, Costa Rica.	April 3.	Carmelita ²¹ .	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.
April 4.	No. 309-N ²² .	Hamburg-American Line.	New York via wayports.	April 4.	Contessa.	Standard Fruit & S. S. Co.	New Orleans and wayp'ts.
April 4.	No. 670-M ²² .	Pan American Airways.	Miami via wayports.	April 4.	Irona.	United Fruit Co.	New Orleans and wayp'ts.
April 4.	No. 9685 ²² .	Pan American Airways.	Managua via wayports.	April 4.	Swiftscout.	Arrow Oil Co.	Curacao, D. W. I.
April 4.	No. 9654 ²² .	Pan American Airways.	San Salvador and wayp'ts.				

²¹ Motor boat. ²² Air mail carrier. ²³ Motor schooner.

PORT OF BALBOA.

March 29.	Frost ²⁴ .	West India Oil Co, N. Y.	Talara, Peru.	April 1.	Frost ²⁴ .	West India Oil Co, N. Y.	Talara, Peru.
March 31.	Haida ^{24 25} .	Max C. Fleischmann.	San Jose de Cabo, Mexico.	April 2.	Haida ^{24 25} .	Max C. Fleischmann.	Manzanillo, Mexico.
April 3.	Nueva Panama ²⁴ .	Panama Bay, R. P.	Panama Bay, R. P.	April 3.	Nueva Panama ²⁴ .	Panama Bay, R. P.	Panama Bay, R. P.
April 3.	Sambu ²⁶ .	Hans Elliot.	Panama Bay, R. P.	April 3.	Sambu ²⁶ .	Hans Elliot.	Panama Bay, R. P.
April 3.	Real ²⁶ .	Hans Elliot.	Panama Bay, R. P.	April 3.	Real ²⁶ .	Hans Elliot.	Panama Bay, R. P.
April 3.	Dos Hermanos ²⁶ .	A. Valdez.	Panama Bay, R. P.	April 3.	Dos Hermanos ²⁶ .	A. Valdez.	Panama Bay, R. P.
April 3.	El Libertador ²⁶ .	Van Camp Seafood Co.	Panama Bay, R. P.	April 3.	El Libertador ²⁶ .	Van Camp Seafood Co.	Panama Bay, R. P.
April 4.	Supreme ²⁴ .	Van Camp Seafood Co.	Panama Bay, R. P.	April 4.	Supreme ²⁴ .	Van Camp Seafood Co.	Panama Bay, R. P.

* Other than ships passing through the Canal.

²⁴ Motor ship. ²⁵ Yacht. ²⁶ Motor schooner.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending April 4, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Gisla.....	Canadian Transport Co.....	March 21.....	March 22.....	350	
Canadian Transporter.	Canadian National Steamships...	March 23.....	March 23.....	19	
Esparta.....	United Fruit Co.....	March 23.....	March 24.....	349	
El Salvador.....	Panama Mail S. S. Co.....	March 24.....	March 24.....	24	
Henderson.....	U. S. Government.....	March 24.....	March 26.....	4	25
Ginyo Maru.....	Nippon Yusen Kaisha.....	March 24.....	March 24.....	122	
Tai Ping.....	Barber S. S. Line.....	March 24.....	March 25.....	249	
Ecuador.....	Panama Mail S. S. Co.....	March 25.....	March 26.....	165	
Acajutla.....	Pacific Steam Navigation Co.....	March 26.....	March 26.....	11	
Santa Inez.....	Grace Line.....	March 28.....	March 28.....	17	1
Julius Schwindler.....	Julius Schwindler.....	March 29.....	March 30.....	3,789	
Frost.....	West India Oil Co.....	March 29.....	April 1.....	300	16
Sabotawan.....	Swayne & Hoyt.....	March 30.....	March 30.....	207	
San Mateo.....	United Fruit Co.....	March 30.....	March 31.....	298	
Santa Maria.....	Grace Line.....	March 30.....	March 31.....	2	
Atago Maru.....	Nippon Yusen Kaisha.....	March 30.....	March 31.....	624	
Courageous.....	Roosevelt S. S. Line.....	March 31.....	April 1.....	226	
Nosa Prince.....	N. O. & S. A. S. S. Co.....	April 1.....	April 1.....	242	
California.....	Panama-Pacific Line.....	April 3.....	April 3.....		199

Coal.

Coal, bunker, Navy Standard, is supplied to steamships including warships of all nations, trimmed in bunkers at \$7.25 at Cristobal and \$10.25 at Balboa per ton of 2,240 pounds. Extra charges are made in accordance with a published tariff for special trimming at the request of the officers of the ship, for galley, lump or run-of-mine coal in sacks, and for delivery, when coal is furnished from lighters or launches away from the coaling piers.

Coal can be bunkered by bunkering machines at any rate up to 1,500 tons per hour, regulated by the amount of necessary trimming.

Coal for cargo is sold at prices quoted on application and on authorization of the Governor.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 15 years of operation.

Density of Water in Balboa and Cristobal Harbors.

Place.	Weight of sea water in ounces per cubic foot.			Rainy season. Average tempera- ture. Degrees F.
	● Average.	Maximum.	Minimum.	
Cristobal (between docks 8 and 9).....	1018	1020	1013	84.0
Balboa (dock 13).....	1011	1021	1005	83.0

(NOTE.—The above is based on two months' observations at Cristobal and Balboa. Average taken at 12-foot depth. Minimum occurred after heavy rain at 3-foot depth at Cristobal and 12-foot depth at Balboa. The weight of a cubic foot of fresh water at 85° F. is 995 ounces.

Cable address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV.

Balboa Heights, C. Z., April 15, 1931.

No. 37.

Completion of Gatun Locks Overhaul.

The quadrennial overhaul of the Gatun Locks, which was begun on January 7, 1931, was completed on April 9, and normal operation from 7 a. m. to 11 p. m. was resumed on April 11. As in previous overhauls, one flight of the locks was repaired at a time, leaving the other side to take care of Canal traffic. During the overhaul the Gatun Locks were operated on a 24-hour basis.

In addition to the routine painting and cleaning, 8 miter gates were removed, inspected, and repaired, 19 new cylindrical valves were installed, completing a program of an improved type of valve commenced in the overhaul of these locks in 1927, and all side seals of the rising stem valves were renewed with babbit alloy seals.

The next locks to be overhauled will be Pedro Miguel and Miraflores during the dry season of 1933.

Comparison of Canal Traffic in March, 1931, with March Traffic in Previous Years.

Commercial traffic through the Canal during the month of March, 1931, was the lowest March traffic in number of transits since 1925 when 398 vessels were passed through the Canal. Cargo tonnage was the lowest carried in any March period since 1922, which was just prior to the beginning of heavy mineral oil traffic through the Canal. In comparison with March, 1930, traffic for the past month declined 76 transits (14.8 per cent); 293,925 net tons (11.7 per cent); and 642,731 cargo tons (25.1 per cent); and in comparison with March, 1929, showed a decrease of 97 transits (18.1 per cent); 356,027 net tons (13.9 per cent); and 828,261 cargo tons (30.2 per cent).

In the tabulation below are shown the number of transits, net tonnage, Panama Canal measurement, and the tons of cargo carried through the Canal during the month of March each year from 1915 to 1931, inclusive, and, for comparison, the monthly averages for the corresponding fiscal year ending June 30 following:

Calendar year.	Month of March.			Fiscal year.	Average per month for fiscal year.		
	Commercial transits.	Panama Canal net tonnage.	Tons of cargo.		Commercial transits.	Panama Canal net tonnage.	Tons of cargo.
1915	137	475,984	607,276	1915	12	361,197	465,567
1916	4	327	1	1916	63	199,687	257,843
1917	146	458,842	571,417	1917	150	483,213	588,213
1918	176	583,249	661,256	1918	172	547,839	627,669
1919	155	477,871	504,985	1919	169	510,416	576,385
1920	235	819,362	894,516	1920	206	712,170	781,208
1921	255	1,112,818	1,084,563	1921	241	951,323	966,601
1922	234	975,811	960,089	1922	228	951,455	907,075
1923	409	1,988,192	1,940,928	1923	331	1,550,482	1,630,656
1924	429	2,136,079	2,272,472	1924	436	2,179,073	2,249,559
1925	398	1,964,106	2,104,324	1925	389	1,904,596	1,996,570
1926	506	2,398,694	2,607,046	1926	433	2,064,549	2,169,787
1927	496	2,413,999	2,533,525	1927	456	2,185,651	2,312,351
1928	542	2,441,077	2,428,662	1928	538	2,454,886	2,469,226
1929	536	2,567,961	2,743,768	1929	534	2,468,483	2,555,250
1930	515	2,505,859	2,558,238	1930	515	2,498,385	2,502,519
1931	439	2,211,934	1,915,507	1931	472	2,361,760	2,154,139

¹ Canal opened August 15, 1914.

² Average for 10½ months.

³ Average for 9 months of fiscal year.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, April 11, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
San Francisco	4	17 50	5	1 10	5	9 05	5	10 00	German	Hamburg-American Line	432.3	59.0	21.8	Hamburg, Germany	Vancouver, B. C.	General	4,342	8,454	6,344
Call	2	23 30	5	2 25	5	11 19	5	13 10	German	Roland Line	216.3	32.9	12.3	Cristobal, C. Z.	Guayaquil, Ecuador	General	127	1,105	698
Santor	4	20 35	5	2 20	5	10 32	5	14 50	Chilean	R. W. James & Co.	356.4	45.0	19.0	New York, N. Y.	Valparaiso, Chile	General	351	4,421	3,063
Saratoga	5	4 45	5	2 35	5	18 20	7	13 50	American	U. S. Navy	874.0	107.0	0	Guantanamo, Cuba	Guantanamo, Cuba	Airplanes			
Teyon	3	19 30	5	2 20	5	17 31	5	18 35	American	General Petroleum Co.	445.8	37.0	20.6	Cristobal, C. Z.	Los Angeles, Calif.	Ballast			
Missourian	5	1 30	5	9 10	5	18 35	5	19 35	American	Amer-Hawaiian Line	425.0	59.8	18.8	Boston, Mass.	Portland, Oreg.	General	3,010	7,218	4,953
Lexington	4	15 25	5	12 00	6	11 00	6	13 50	British	U. S. Navy	874.0	107.0	0	Guantanamo, Cuba	Los Angeles, Calif.	Airplanes			
Devon	5	5 50	5	14 20	6	8 20	6	9 37	British	Federal Steam Nav. Co.	473.0	59.0	24.10	Glasgow, Scotland	Wellington, N. Z.	Ballast			
Five Naves launches			5	15 52	5	15 52	5	15 52	American	U. S. Navy	450.0	58.5	20.0	Cristobal, C. Z.	Gatun, C. Z.	(7)			
Albionstar	5	13 25	6	2 50	6	12 00	6	12 55	British	Blue Star Line	450.0	58.5	20.0	Newcastle, England	Seattle, Wash.	Ballast			
Dilworth	5	14 40	6	4 25	6	12 44	6	13 45	American	Shell Oil Co.	435.0	56.0	22.0	New York, N. Y.	Los Angeles, Calif.	Ballast			
No. 347	5	5 55	6	6 00	6	14 20	6	14 20	American	U. S. Navy	310.0	31.0	0	Guantanamo, Cuba	San Diego, Calif.	Ballast			
No. 210	4	5 28	6	6 00	6	15 03	7	13 50	American	U. S. Navy	310.0	31.0	0	Guantanamo, Cuba	San Diego, Calif.	Ballast			
No. 346	4	22 20	6	6 00	6	15 03	7	13 50	American	U. S. Navy	310.0	31.0	0	Guantanamo, Cuba	San Diego, Calif.	Ballast			
Janeta	6	5 50	6	6 50	6	16 25	6	16 25	British	Maclay & McIntyre	402.4	55.1	17.0	North Shields, Eng.	San Diego, Calif.	Ballast			
Lebore	4	18 20	6	9 25	6	17 00	6	18 10	American	Ore S. S. Corp.	549.0	72.0	23.9	Baltimore, Md.	Vancouver, B. C.	Ballast			
Bullaren	4	10 05	6	10 30	6	17 42	6	20 55	Swedish	North Brothers	437.0	57.0	21.0	Antwerp, Belgium	Seattle, Wash.	General			
Ludwigshafen	6	00 15	6	11 20	6	21 50	6	23 00	German	North German Lloyd	383.5	54.3	24.0	Hamburg, Germany	San Antonio, Chile	General			
Chewink	6	00 15	6	6 50	6	15 15	6	15 15	American	U. S. Navy	180.0	33.6	0	Cristobal, C. Z.	Balboa, C. Z.	Ballast			
Activo	6	6 45	6	9 05	6	11 41	6	11 41	British	Pacific Steam Nav. Co.	40.0	10.7	0	Cristobal, C. Z.	Gatun, C. Z.	Ballast			
Absaroka	6	18 45	6	19 10	7	9 04	7	11 30	American	McCormick S. S. Co.	409.6	54.1	10.6	Baltimore, Md.	Seattle, Wash.	General			
Hearlom	6	5 55	7	3 10	7	11 16	7	12 15	Dutch	Royal Neth. S. S. Co.	361.3	50.0	17.6	Hamburg, Germany	Corral, Chile	General			
Siam	6	15 45	7	6 20	7	14 20	7	15 50	Danish	East Asiatic Co.	410.0	55.0	24.0	Copenhagen, Den.	Vancouver, B. C.	General			
Port Campbell	7	6 15	7	7 10	7	14 43	7	16 50	British	Com'lth & Dom. Line.	480.0	62.0	22.6	New York, N. Y.	Fromantle, Aust'lia	General			
Hindanger	7	7 30	7	8 55	7	16 38	7	17 35	Norwegian	Westfal, Larsen & Co.	398.0	54.9	17.0	Rotterdam, Holland	Los Angeles, Calif.	Passengers only			
Canadian																			
Commander	7	1 22	7	10 05	7	18 20	7	19 35	British	Can. Nat. Steamships	400.0	52.0	20.6	Halifax, N. S.	Sydney, Australia	General			
Roanoke	7	9 20	7	11 40	7	18 40	7	21 40	American	The Texas Co.	417.0	56.0	20.6	Wilmingon, N. C.	Los Angeles, Calif.	Ballast			
Troutpool	7	20 25	8	00 15	8	9 23	8	10 39	British	Can. Co. Wheat Prod'rs	394.0	55.5	15.6	Liverpool, England	Vancouver, B. C.	Ballast			
Dryden	8	1 00	8	2 45	8	10 15	8	14 20	American	Tampa Intercean Co.	430.3	57.7	23.0	New Orleans, La.	Hilo, P. I.	General			
Nome	8	2 35	8	4 20	8	13 45	8	14 46	Norwegian	Strang & Co.	350.7	50.8	12.0	Baltimore, Md.	Grays Harb., Wash.	Ballast			
Mexia	8	3 25	8	5 40	8	13 31	8	14 20	American	Amer-Hawaiian Line	472.3	57.2	17.0	Boston, Mass.	Tacoma, Wash.	General			
Columbia	7	10 40	8	13 35	8	20 35	9	6 29	American	Panama Mail S. S. Co.	380.0	48.7	23.0	New York, N. Y.	San Francisco, Cal.	Coffee, general			
Drechtidijk	7	19 35	8	21 52	8	20 52	9	1 17	Dutch	Holland-America Line.	485.0	62.0	20.0	Rotterdam, Holland	Vancouver, B. C.	General, bananas			
Benjamin	7	22 00	8	15 15	8	23 15	10	14 50	Norwegian	Fred Olsen & Co.	482.0	69.5	23.5	Oslo, Norway	Vancouver, B. C.	General, steel			
Franklin	7	22 00	8	14 15	8	23 15	10	14 50	Norwegian	Fred Olsen & Co.	482.0	69.5	23.5	Oslo, Norway	Vancouver, B. C.	General, steel			

¹ Tanker. ² Motor ship. ³ Aircraft carrier. ⁴ Destroyer. ⁵ Mine sweeper. ⁶ Launch. ⁷ For U. S. S. *Lerington*. ⁸ General and lubricating oil.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.						
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.					
Mathew	5	17	20	5	18	35	6	2	45	American.	Lockenbach Line	434	3	57	7	27	0	Portland, Ore.	Mobile, Ala.	General.	4,000	7,977	5,764	
Lockenbach.										American.	The Texas Co	418	3	56	1	21	0	Los Angeles, Calif.	Providence, R. I.	Gasoline.	8,412	6,782	4,987	
Texas	6	3	30	6	15	25	6	15	25	American.	Federal Steam Nav. Co	530	0	64	2	23	2	Pt. Chalmers, N. Z.	London, England.	General.	5,036	12,930	9,300	
Cumberland	5	21	55	6	7	16	6	16	30	British.	Tampa Interoceanic Co.	409	0	64	2	27	1	Manila, P. I.	New York, N. Y.	Sugar.	8,700	7,486	5,852	
Edmore	6	4	58	6	8	28	6	17	23	American.		409	0	64	2	27	1							
K. H.	6	7	59	6	9	39	6	18	20	American.	Shell Oil Co. of Calif.	440	0	58	2	28	1	Los Angeles, Calif.	Fall River, Mass.	(¹⁶) Gasoline.	9,777	9,033	5,938	
Kingbury	6	14	45	6	15	58	7	1	20	American.	The Texas Co	416	8	56	1	26	0	Los Angeles, Calif.	Baltimore, Md.	Gasoline.	8,496	6,932	5,041	
Reaper	6	18	20	6	19	13	7	5	13	British.	Com th & Dom. Line.	470	0	58	2	23	0	Wellington, N. Z.	London, England.	Frozen, general.	8,146	9,336	6,682	
Port Victor	6	18	20	6	19	13	7	5	13	British.		470	0	58	2	23	0							
Chateau	7	6	15	7	15	55	8	11	00	American.	U. S. Army.	448	0	56	0	26	5	Balboa, C. Z.	New York, N. Y.					
Therry	7	6	15	7	15	55	8	11	00	American.		448	0	56	0	26	5							
Emma	6	22	20	7	6	16	7	16	25	Danish.	Standard Shipping Co.	466	0	61	6	27	0	Talara, Peru.	Halifax, N. S.	Crude oil.	12,428	8,646	6,024	
Meersk	6	21	10	7	7	32	7	17	20	Danish.	Richardson & Co.	378	0	54	2	24	4	Vancouver, B. C.	Falmouth, Eng.	Wheat.	7,026	6,235	4,486	
Roren	7	1	50	7	8	32	7	18	20	American.	Amer.-Hawaian Line	445	1	59	8	26	0	Portland, Ore.	Boston, Mass.	General.	8,591	8,567	6,020	
Californian	6	21	20	7	8	51	7	19	05	British.	Furness, Withy & Co	436	0	60	3	27	0	Vancouver, B. C.	London, England.	General.	8,417	9,725	6,942	
Pacific Ranger	7	8	00	7	9	35	7	21	15	British.	Reardon Smith Line	400	5	54	3	25	0	Vancouver, B. C.	Manchester, Eng.	General.	7,300	7,003	5,406	
Quebec City	7	8	00	7	9	35	7	21	15	British.		400	5	54	3	25	0							
San Francisco	7	8	15	7	9	53	7	21	45	Japanese.	Kokusai Kisen Kaisha.	385	0	51	0	27	0	Mambuguid, P. I.	East coast U. S. A.	Sugar.	7,800	6,213	4,672	
Maru	7	10	00	7	11	06	7	22	10	American.	Swayne & Hoyt.	324	0	46	2	19	3	Portland, Ore.	New Orleans, La.	General.	2,644	3,984	2,643	
Point Gorda	7	10	00	7	11	06	7	22	10	American.		324	0	46	2	19	3							
Pacific Fir	7	10	20	7	11	35	7	23	15	American.	Dixon S. S. Corp.	410	5	54	0	25	5	Seattle, Wash.	Norfolk, Va.	Lumber, general.	7,575	6,624	4,883	
Chaumont	6	21	30	7	13	18	7	20	50	American.	U. S. Navy.	448	0	58	2	25	0	San Francisco, Cal.	Hampton Rds., Va.	General.	8,417	9,725	6,942	
Jedmoor	7	11	10	7	15	45	7	23	50	British.	Continental Grain Co.	375	0	52	6	25	4	Vancouver, B. C.	Lisbon, Portugal.	Wheat.	7,450	6,050	4,615	
Nordhavet	7	20	30	8	6	16	8	14	30	Danish.	Inter. Freighting Co.	385	6	54	9	25	0	Tocopilla, Chile.	Pensacola, Fla.	Nitrates.	8,000	6,591	4,936	
Athel	8	1	00	8	7	05	8	15	15	British.	British Molasses Co.	475	0	63	5	27	0	Hilo, T. H.	Lands End, Eng.	Molasses.	12,600	9,587	6,379	
Duchess	8	9	30	8	20	10	8	21	05	Belgian.	Cie Maritime Belge.	400	0	52	3	25	0	Vancouver, B. C.	London, England.	General.	4,920	5,838	4,103	
Kambove	8	11	15	8	12	03	8	20	10	British.	Pacific Steam Nav. Co.	215	0	33	5	14	3	Champerico, Guat.	Cristobal, C. Z.	General.	334	1,270	735	
Salvador	8	13	45	8	15	28	9	00	15	German.	Hamburg-American Line	227	2	34	4	14	3	Guayaquil, Ecuador	Cristobal, C. Z.	General.	803	1,572	1,011	
Cergo	8	13	45	8	15	28	9	00	15	German.		227	2	34	4	14	3							
J. L.	8	14	30	8	15	36	9	00	05	American.	Lockenbach Line	448	9	60	2	29	1	San Francisco, Cal.	Boston, Mass.	General.	6,875	9,294	6,351	
Venezuela	8	11	30	8	15	36	9	00	05	American.	Panama Mail S. S. Co.	380	0	48	7	21	0	San Francisco, Cal.	New York, N. Y.	General.	1,783	6,033	4,863	
Luckenbach.	8	14	30	8	15	36	9	00	05	American.		380	0	48	7	21	0							
Sir James	8	23	00	9	7	06	9	16	25	Norwegian.	Rasmussen & Konow.	537	9	74	3	34	0	Stewart Is., N. Z.	New York, N. Y.	Whale oil.	19,000	16,364	11,790	
Otao	9	7	35	9	8	57	9	18	40	British.	N. Z. Shipping Co.	462	0	67	2	25	0	Dunedin, N. Z.	Glasgow, Scotland	Frozen, general.	5,432	13,016	9,415	
Portland	9	7	50	9	9	22	9	17	35	German.	Hamburg-American Line	472	0	61	2	26	8	Vancouver, B. C.	Hamburg, Germany	General.	8,062	9,139	6,666	
Kekekeke	9	9	55	9	10	32	9	18	55	American.	Royal Field Oil Co.	391	8	53	1	25	0	Los Angeles, Calif.	New York, N. Y.	General.	5,913	5,550	3,920	
Baratl	9	10	15	9	11	10	9	20	10	Dutch.	Royal Neth. S. S. Co.	202	9	31	3	12	10	Guayaquil, Ecuador	Cristobal, C. Z.	General.	550	1,182	742	
Cambridge	9	7	50	9	14	32	9	21	45	British.	Federal Steam Nav. Co.	524	5	65	7	24	0	Auckland, N. Z.	London, England.	Frozen, general.	6,489	12,482	8,863	

¹⁶ Gasoline and kerosene.

¹⁸ For orders.

¹⁴ Motor ship.

² Tanker.

Ship	Date	Time	Origin	Destination	Remarks
Tokai Maru ¹⁴	9 16 25	9 17 08	10 00 15	10 00 15	9 50 Japanese
Chilore	10 2 00	10 6 03	10 18 10	10 18 10	10 30 American
Empress of Australia	9 5 07	10 6 20	10 14 55	10 14 55	10 00 British
Hansa ¹⁴	9 21 30	10 7 22	10 17 05	10 17 05	10 05 German
Port Pirie	9 21 30	10 8 20	10 18 40	10 18 40	10 40 British
Tokuboku Maru	9 22 40	10 8 50	10 18 55	10 18 55	10 20 Japanese
Cauca ¹⁴	10 6 50	10 8 32	10 17 20	10 17 20	10 35 Colombian
Steel Engineer	9 21 30	10 9 32	10 19 14	10 19 14	10 35 American
Kenows	9 13 45	10 14 15	10 22 35	10 22 35	9 14 American
Oroya	10 13 30	10 15 06	10 23 55	10 23 55	9 20 British
Iowan	10 13 45	10 15 19	10 23 25	10 23 25	20 30 American
Henry S. Grove	10 18 40	10 18 58	11 2 00	11 2 00	2 00 American
New Jersey ¹⁴	10 21 30	11 14 15	11 13 40	11 13 40	14 15 American
Port Alma ¹⁴	10 17 40	11 6 26	11 13 15	11 13 15	13 40 British
Illinois ¹⁴	11 5 45	11 7 48	11 15 15	11 15 15	15 15 American
Sheaf Lance	10 21 55	11 9 19	11 18 40	11 18 40	19 40 British
Atlantic	11 6 30	11 10 54	11 20 35	11 20 35	19 50 American
Seminole ¹⁴	11 10 50	11 12 40	11 21 35	11 21 35	20 35 British
Grantley Hall	11 13 25	11 14 45	11 23 00	11 23 00	23 00 American
Eastern Sun ¹⁴	11 15 10	11 16 04	11 23 25	11 23 25	23 25 American
Cortino	11 15 10	11 16 04	11 23 25	11 23 25	23 25 American
Canadian	11 15 15	11 16 25	12 11 25	12 11 25	13 00 British
Winner	11 15 45	11 17 00	12 11 50	12 11 50	11 50 British
Gralstone	11 15 45	11 17 00	12 11 50	12 11 50	11 50 British
Lochmonar ¹⁴	11 15 45	11 17 00	12 11 50	12 11 50	11 50 British

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL

Date	Vessel	ARRIVALS		DEPARTURES		For
		Line	From	Date	Line	
April 5	Costarica	Royal Netherlands S. S. Co.	Amsterdam via waypoints	April 5	Hamburg-American Line	Cartagena, Colombia.
April 5	Pastores	United Fruit Co.	Port Limon, Costa Rica.	April 5	Pan American Airways	San Salvador via waypoints.
April 6	Tillie Lykes	Lykes Brothers S. S. Co.	New York via Habana.	April 5	United Fruit Co.	New York via Habana.
April 6	Wauna	Standard Fruit & S. S. Co.	Galveston, Texas.	April 5	United Fruit Co.	New York via Habana.
April 6	Darien C-35 ¹⁷	Seada Airplane Co.	Puerto Cabezas, Nic.	April 6	P. W. Hamilton	Colon, Rep. of Panama.
April 7	No. 300-N ¹⁷	Pan American-Grace Airways	Barranquilla and waypoints.	April 6	Pan American Airways	Miami via waypoints.
April 7	Grunewald	Hamburg-American Line	Hamburg via waypoints.	April 6	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
April 8	Cristobal	Panama R. S. S. Line	New York via Haiti.	April 6	United Fruit Co.	New York via waypoints.
April 8	Anacuacuna ¹⁸	United Fruit Co.	New Orleans, La.	April 6	Lykes Brothers S. S. Co.	Galveston via waypoints.
April 8	Skaola	United Fruit Co.	Colon, Rep. of Panama.	April 8	Standard Fruit & S. S. Co.	Puerto Cabezas, Nic.
April 8	Inapaquina ¹⁸	A. Tagaropolos	New York via Kingston.	April 8	Pan American Airways	San Salvador via waypoints.
April 8	No. 669-N ¹⁷	Pan American Airways	Colon, Rep. of Panama.	April 8	United Fruit Co.	Miami via waypoints.
April 8	No. 9088 ¹⁷	Pan American Airways	Miami via waypoints.	April 8	A. Tagaropolos	Colon, Rep. of Panama.
April 9	Martinique	Pan American Airways	San Salvador and waypoints.	April 8	Hamburg-American Line	Tamisco via waypoints.
		Colombian S. S. Line	New York via waypoints.	April 9	United Fruit Co.	Port Limon via Bocas.

* Other than ships passing through the Canal.

¹⁷ Air mail carrier. ¹⁸ Motor boat.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
April 10	Ariguani	Elders & Pyffes, Ltd	Avonmouth via wayports,	April 9	No. 309-N ¹⁹	Pan American Airways	La Guayra via wayports.
April 10	Ulua	United Fruit Co.	New York via Habana.	April 9	Sixaola	United Fruit Co.	Cartagena, Colombia.
April 10	Cefalu	Standard Fruit & S. S. Co.	New Orleans via Habana.	April 10	Martinique	Colombian S. S. Line.	New York via Kingston.
April 10	Costarica	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	April 10	Ulua	United Fruit Co.	Port Limon, Costa Rica.
April 10	Convallaria	Aluminium Line.	Tampa, Florida.	April 10	Darien C-35 ¹⁹	Scadia Airplane Co.	Barranquilla and waypts.
April 11	Tela	United Fruit Co.	Port Limon, Costa Rica.	April 11	Anachucuna ²⁰	United Fruit Co.	Colon, Rep. of Panama.
April 11	No. 309-N ¹⁹	Pan American Airways	La Guayra via wayports.	April 11	Cefalu	Standard Fruit & S. S. Co.	New Orleans and waypts.
April 11	No. 968-M ¹⁹	Pan American Airways	Miami via wayports.	April 11	Tela	United Fruit Co.	New Orleans and waypts.
April 11	No. 144-M ¹⁹	Pan American Airways	Pimental via wayports.	April 11	Convallaria	Aluminium Line.	New Orleans and waypts.
April 11	No. 9664 ¹⁹	Pan American Airways	San Salvador via waypts.	April 11	Ariguani	Elders & Pyffes, Ltd.	Avonmouth via wayports.
April 11	Annetta I.	P. W. Hamilton.	Colon, Rep. of Panama.	April 11	Carmelita ²¹	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.
April 11	Anachucuna ²⁰	United Fruit Co.	Colon, Rep. of Panama.				
April 11	Inapachucuna ²⁰	A. Tagaropoulos	Colon, Rep. of Panama.				
April 10	Carmelita ²¹	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.				

¹⁹ Air mail carrier. ²⁰ Motor boat. ²¹ Motor schooner.

PORT OF BALBOA.

April 10	All America	All America Cables, Inc.	Callao, Peru.	April 10	Sambu ²²	Hans Elliot	Panama, R. P.
April 10	Sambu ²²	Hans Elliot	Panama, R. P.				

²² Motor ship.

* Older than ships passing through the Canal.

Commercial Traffic Through the Panama Canal in March, 1931, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of March, 1931, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for March, 1930 and 1929. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States	73	388,315	296,868	477,498	296,853	\$334,014.64	180,168
Europe to Canada:							
Belgian	1	6,292	5,752	7,816	5,758	4,530.24	.....
British	10	55,629	40,025	64,978	40,153	42,730.09	6,613
Danish	2	13,417	9,946	16,760	10,417	11,135.97	3,047
French	2	11,982	7,028	13,830	7,463	8,785.00	3,794
German	2	13,648	8,619	15,048	9,070	10,773.75	5,181
Italian	2	12,154	8,975	14,933	9,413	11,218.75	2,283
Norwegian	2	12,257	7,038	11,671	7,132	8,797.50	8,138
Swedish	1	5,337	2,861	5,210	3,747	3,576.25	3,152
Total	22	130,716	90,244	150,246	93,153	101,547.55	32,208
United States to South America:							
British	6	22,741	17,396	28,178	17,358	19,512.81	4,642
Chilean	1	4,705	3,466	7,310	3,976	4,332.50	1,325
Danish	1	4,569	2,709	4,472	2,732	3,386.25	2,250
Japanese	1	4,400	4,358	5,864	4,259	3,268.50	.....
Swedish	2	8,917	7,486	30,676	8,762	6,420.24	.....
United States	9	36,817	27,472	51,027	27,418	29,970.50	13,479
Total	20	82,149	62,887	127,527	64,505	66,890.80	21,696
United States to Far East:							
British	5	28,761	16,591	28,926	16,683	20,738.75	19,847
Japanese	7	37,279	32,317	48,638	31,564	40,048.70	36,611
Norwegian	2	11,769	6,511	11,045	6,628	8,138.75	6,410
United States	3	16,183	10,769	17,571	10,722	13,461.25	20,493
Total	17	93,992	66,188	106,180	65,597	82,387.45	83,361
Europe to South America:							
British	3	22,012	18,267	30,306	18,593	22,833.75	8,441
Chilean	1	.....	.....	.....	.....	14,000.00	.....
Dutch	2	9,825	5,355	9,164	5,565	6,693.75	3,962
French	1	4,936	3,385	5,751	3,555	4,231.25	1,164
German	4	20,070	14,996	24,743	14,846	17,248.28	6,851
Italian	1	9,373	5,223	11,669	6,779	6,528.75	1,641
Norwegian	1	5,001	2,753	4,744	2,829	3,441.25	3,082
Swedish	1	3,967	3,072	5,065	4,065	3,840.00	5,580
Total	14	75,184	53,051	91,442	56,232	78,817.03	30,721
Cristobal to South America:							
British	1	1,587	1,282	2,533	1,411	1,142.64	.....
Colombian	4	570	550	880	550	668.90	432
Dutch	2	1,484	588	1,560	646	735.00	246
German	6	5,273	3,396	6,551	3,530	4,245.00	1,208
Total	13	8,914	5,816	11,524	6,137	6,791.54	1,886
Europe to Australasia:							
British	11	85,054	59,065	97,827	59,725	73,831.25	40,457
French	1	3,797	3,089	5,106	3,077	3,861.25	3,434
Total	12	88,851	62,154	102,933	62,802	77,692.50	43,891
Europe to United States:							
British	5	27,518	24,376	35,918	24,410	21,574.26	1,996
French	1	5,001	4,377	7,011	3,989	3,600.72	.....
German	1	7,698	5,626	9,026	5,637	7,032.50	1,372
Japanese	1	4,977	4,177	5,665	4,341	3,583.44	.....
Norwegian	3	15,806	12,157	20,168	11,873	11,380.32	.....
Total	11	61,000	50,713	77,788	50,250	47,171.24	3,368

* Naval vessel of 28,000 tons displacement.

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States to Philippine Islands:							
British.....	2	11,229	6,543	11,730	6,734	\$8,178.75	4,815
Danish.....	1	4,483	2,495	4,194	2,582	3,118.75	4,625
United States.....	3	18,854	15,763	24,196	15,054	19,703.75	16,863
Total.....	6	34,566	24,801	40,120	24,320	31,001.25	26,303
Cristobal to United States:							
British.....	1	4,459	3,736	6,138	3,838	3,210.48	.....
United States.....	4	9,301	8,284	13,504	8,281	8,546.51	299
Total.....	5	13,760	12,020	19,642	12,119	11,756.99	299
Cristobal to Central America:							
British.....	2	1,441	1,286	2,297	1,304	1,607.50	1,344
Norwegian.....	1	722	579	990	569	519.84	.....
United States.....	2	4,155	2,517	4,408	2,510	3,146.25	963
Total.....	5	6,318	4,382	7,695	4,383	5,273.59	2,307
United States to Canada:							
Danish.....	1	4,691	2,705	4,532	2,772	3,377.52	.....
United States.....	3	15,521	11,774	18,579	11,665	14,717.50	19,186
Total.....	4	20,212	14,479	23,111	14,437	18,095.02	19,186
South America to Canada:							
Norwegian.....	1	5,308	2,894	4,873	2,984	3,617.50	3,840
United States.....	2	10,060	7,095	11,130	7,074	8,868.75	6,157
Total.....	3	15,368	9,989	16,003	10,058	12,486.25	9,997
Foreign vessels in ballast— United States inter-coastal:							
British.....	1	5,861	3,129	5,299	3,091	3,911.25	.....
Norwegian.....	1	5,058	2,788	4,663	2,793	3,485.00	.....
Total.....	2	10,919	5,917	9,962	5,884	7,396.25	.....
United States to Australasia:							
British.....	2	10,900	7,441	11,749	7,482	9,301.25	7,418
Canadian intercoastal:							
British.....	2	8,372	6,644	10,904	6,736	8,305.00	3,665
Canada to Australasia:							
British.....	2	13,130	10,407	16,371	10,225	12,633.75	9,543
West Indies to Canada:							
Norwegian.....	2	7,304	5,991	9,831	5,973	7,488.75	808
South American intercoastal:							
Danish.....	1	6,127	5,268	8,939	5,007	4,411.44	.....
German.....	1	1,837	1,295	2,159	1,263	1,618.75	1,950
Total.....	2	7,964	6,563	11,098	6,270	6,030.19	1,950
Round the world:							
United States.....	2	18,429	12,589	21,020	12,589	15,736.25	7,292
Canada to United States:							
British.....	1	2,207	1,239	2,338	1,249	1,548.75	3,929
South America to Far East:							
Japanese.....	1	7,626	5,441	9,627	5,848	6,801.25	3,694
Europe to Central America:							
German.....	1	1,967	1,689	2,867	1,690	2,111.25	2,138
West Indies to Balboa:							
German.....	1	1,934	1,609	2,770	1,517	2,011.25	3,789
Grand total, March, 1931.....	223	1,110,097	818,822	1,360,246	826,309	953,289.79	499,617
Grand total, March, 1930.....	248	1,201,280	890,694	1,472,073	894,532	1,027,047.10	741,986
Grand total, March, 1929.....	267	1,269,820	962,148	1,586,095	968,099	1,095,635.11	841,941

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	63	367,941	275,806	448,455	274,780	\$344,747.50	486,904
Canada to Europe:							
Belgian.....	1	7,044	4,567	7,217*	4,398	5,708.75	10,450
British.....	18	102,314	74,211	117,710	72,812	92,763.75	126,105
Dutch.....	2	15,407	10,748	17,465	10,832	13,435.00	18,124

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Canada to Europe—Continued:							
French	1	7,513	4,581	8,152	4,882	\$5,726.25	6,750
German	4	26,584	17,628	29,566	18,031	22,035.00	33,596
Italian	2	11,973	8,719	14,159	8,958	10,898.75	17,565
Norwegian	4	17,234	11,709	19,278	11,825	14,636.25	25,277
Swedish	2	10,452	6,320	10,514	7,890	7,900.00	12,678
Total	34	198,521	138,483	224,061	139,628	173,103.75	250,545
South America to United States:							
British	4	12,195	10,080	16,117	10,021	12,600.00	22,073
Chilean	3	13,194	9,219	16,237	9,458	11,523.75	17,641
Norwegian	2	9,176	6,020	9,917	6,023	7,525.00	15,350
Swedish	2	8,917	7,486	30,876	8,762	9,357.50	42,810
United States	11	45,667	32,135	58,958	32,045	40,043.17	63,909
Total	22	89,149	64,940	132,105	66,309	81,049.42	161,783
South America to Europe:							
British	4	37,973	28,179	48,631	29,885	35,223.75	26,319
Danzig	1	6,127	5,268	8,939	5,007	6,585.00	11,300
Dutch	2	10,895	7,185	12,446	7,244	8,981.25	15,407
French	2	9,207	7,549	12,303	7,634	9,436.25	16,596
German	6	30,702	23,031	37,334	22,444	28,788.75	47,188
Norwegian	1	3,925	3,118	5,113	3,125	3,897.50	6,136
Total	16	98,829	74,330	124,766	75,339	92,912.50	122,946
South America to Cristobal:							
Colombian	5	731	712	1,113	716	870.50	914
Dutch	1	742	294	780	323	367.50	240
German	5	4,532	2,777	5,480	2,890	3,471.25	2,103
United States	1	55	67	98	67	50.25	.....
Total	12	6,060	3,850	7,471	3,996	4,759.50	3,257
Australasia to Europe:							
British	13	106,912	73,131	120,123	74,154	91,413.75	79,166
French	1	5,629	4,343	7,007	4,402	5,428.75	4,857
Total	14	112,541	77,474	127,130	78,556	96,842.50	84,023
Philippine Islands to United States:							
Danish	1	5,500	3,081	5,038	3,155	3,851.25	7,575
Japanese	6	29,614	25,898	37,393	25,528	32,372.50	46,999
Norwegian	1	6,829	3,973	6,687	4,085	4,966.25	5,893
United States	3	18,590	14,598	22,809	14,496	18,247.50	29,187
Total	11	60,533	47,550	71,927	47,264	59,437.50	89,654
United States to Europe:							
British	2	9,230	7,691	12,694	7,546	9,613.75	15,628
French	2	9,565	6,999	12,995	6,799	8,748.75	15,572
Italian	1	4,421	3,764	6,107	3,883	4,705.00	3,078
Norwegian	2	10,616	9,044	14,712	8,858	11,305.00	19,793
United States	2	11,507	9,871	14,191	9,921	12,171.70	18,554
Total	9	45,339	37,369	60,699	37,007	46,554.20	72,625
United States to Cristobal:							
United States	6	14,048	11,602	19,166	11,509	14,449.45	7,360
Central America to Cristobal:							
British	2	1,441	1,286	2,298	1,304	1,607.50	590
Norwegian	1	722	579	990	569	723.75	702
United States	1	1,549	1,167	1,974	1,161	1,458.75	1,612
Total	4	3,712	3,032	5,262	3,034	3,790.00	2,904
Hawaii to United States:							
United States	3	11,399	8,154	12,466	8,180	10,150.20	18,536
South America to Canada:							
British	2	12,989	11,069	20,293	10,538	13,836.25	27,510
Danzig	1	7,888	5,410	9,006	5,111	6,762.50	13,300
Total	3	20,877	16,479	29,299	15,649	20,598.75	40,810
Australasia to United States:							
Norwegian	1	3,540	2,390	3,971	2,452	2,987.50	6,594
United States	1	5,247	3,825	6,197	3,822	4,781.25	7,583
Total	2	8,787	6,215	10,168	6,274	7,768.75	14,177

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Far East to United States:							
Japanese.....	2	11,020	8,645	14,017	8,497	\$10,806.25	7,655
Canada to United States:							
Norwegian.....	2	8,972	4,888	8,272	4,967	6,110.00	12,599
United States to West Indies:							
United States.....	2	6,294	5,367	8,752	5,328	4,531.68	.....
Canadian intercoastal:							
British.....	2	9,097	6,727	11,098	6,863	8,408.75	15,534
Australasia to Canada:							
British.....	2	8,632	6,556	10,828	6,596	8,195.00	3,024
Central America to Europe:							
German.....	1	1,967	1,689	2,867	1,690	2,111.25	1,150
Norwegian.....	1	722	579	990	569	723.75	668
Total.....	2	2,689	2,268	3,857	2,259	2,835.00	1,818
Balboa to United States:							
United States.....	1	332	320	662	320	240.00	.....
Far East to West Indies:							
Norwegian.....	1	5,131	2,829	4,819	2,829	3,536.25	8,220
Balboa to West Indies:							
German.....	1	1,934	1,566	2,770	1,517	1,392.48	.....
United States to South America:							
United States.....	1	5,011	3,623	5,702	3,580	4,528.75	6,652
Canada to South America:							
United States.....	1	4,989	3,517	5,550	3,517	4,396.25	4,864
Grand total, March, 1931.....	216	1,101,837	811,590	1,349,302	813,798	1,011,144.43	1,415,890
Grand total, March, 1930.....	267	1,304,579	986,078	1,631,485	994,054	1,232,955.26	1,816,252
Grand total, March, 1929.....	269	1,298,141	1,002,898	1,644,148	1,008,805	1,248,230.44	1,901,827

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 2, 1931.

No. 864.

Panama Canal, north end of Bas Obispo Reach, aids to navigation. Beacon No. 2, which was temporarily discontinued on June 6, 1930, on account of dredging operations, was temporarily replaced by a floating light, flashing red, at station No. 1496 on April 1, 1931, due to the dredge being removed.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 9, 1931.

No. 867.

Central America, Nicaragua, Corinto Harbor, buoy replaced. The following message was received from the commanding officer of the U. S. S. *Rochester* through the Balboa Radio Station:

Buoy No. 5 in Corinto Harbor was replaced on April 7, 1931, 300 yards, 72° 15' from Cardon Head Light.

Approximate position of Cardon Head Light: Lat. 12° 27' 54" N., long. 87° 12' 30" W.

(NOTE.—See Notice to Mariners No. 851, Balboa Heights, dated March 5, 1931, for information concerning positions of other buoys in Corinto Harbor.)

H. BURGESS,
Governor.

Traffic by Nationality for March, 1931.

The following tabulation shows the commercial traffic through the Canal during the month of March, 1931, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for March, 1930 and 1929:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	6,292	5,752	7,816	5,758	\$4,530.24	
British.....	54	300,901	217,127	355,492	218,992	251,060.28	112,710
Chilean.....	2	4,705	3,466	7,310	3,976	18,332.50	1,325
Colombian.....	4	430	550	880	550	668.90	472
Danish.....	5	27,160	17,855	29,958	18,453	21,018.49	9,922
Danzig.....	1	6,127	5,268	8,939	5,007	4,411.44	
Dutch.....	4	11,309	5,943	10,724	6,211	7,428.75	4,208
French.....	5	25,716	17,879	31,698	18,084	20,478.22	8,392
German.....	16	52,427	37,230	63,164	37,553	45,040.78	22,489
Italian.....	3	21,527	14,198	26,602	16,192	17,747.50	3,924
Japanese.....	10	54,282	46,293	69,794	46,012	53,701.89	40,305
Norwegian.....	13	63,225	40,711	67,985	40,781	46,868.91	22,278
Swedish.....	4	18,221	13,419	40,951	16,574	13,836.49	8,732
United States.....	101	517,635	393,131	638,933	392,166	448,165.40	264,900
Total, March, 1931.....	223	1,110,097	818,822	1,360,246	826,309	953,289.79	499,617
Total, March, 1930.....	248	1,201,280	890,694	1,472,073	894,532	1,027,047.10	741,986
Total, March, 1929.....	267	1,269,820	962,148	1,586,095	968,099	1,095,635.11	841,941

* Includes naval vessel of 28,000 displacement tons.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	7,044	4,567	7,217	4,398	\$5,708.75	10,450
British.....	49	300,783	218,930	359,792	219,719	273,662.50	315,949
Chilean.....	3	13,194	9,219	16,237	9,458	11,523.75	17,641
Colombian.....	5	731	712	1,113	716	870.50	914
Danish.....	1	5,500	3,081	5,038	3,155	3,851.25	7,575
Danzig.....	2	14,015	10,678	17,945	10,118	13,347.50	24,600
Dutch.....	5	27,044	18,227	30,691	18,399	22,782.75	33,771
French.....	6	31,914	23,472	40,457	23,717	29,340.00	43,775
German.....	17	65,719	46,691	78,017	46,572	57,798.78	84,037
Italian.....	3	16,394	12,483	20,266	12,841	15,603.75	20,643
Japanese.....	8	40,634	34,543	51,410	34,025	43,178.75	54,654
Norwegian.....	16	66,867	45,129	74,749	45,302	56,411.25	101,232
Swedish.....	4	19,369	13,806	41,390	16,652	17,257.50	55,488
United States.....	96	492,629	370,052	604,980	368,726	459,806.45	645,161
Totals, March, 1931.....	216	1,101,837	811,590	1,349,302	813,798	1,011,144.43	1,415,890
Total, March, 1930.....	267	1,304,579	986,078	1,631,485	994,054	1,232,955.26	1,816,252
Total, March, 1929.....	269	1,298,141	1,002,898	1,644,148	1,008,805	1,248,230.44	1,901,827

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	13,336	10,319	15,033	10,156	\$10,238.99	10,450
British.....	103	601,684	436,057	715,284	438,711	524,722.78	428,659
Chilean.....	5	17,899	12,685	23,547	13,434	29,856.25	18,966
Colombian.....	9	1,301	1,262	1,993	1,266	1,539.40	1,346
Danish.....	6	32,660	20,936	34,996	21,608	24,869.74	17,497
Danzig.....	3	20,142	15,946	26,884	15,125	17,758.94	24,600
Dutch.....	9	38,353	24,170	41,415	24,610	30,212.50	37,979
French.....	11	57,630	41,351	72,155	41,801	49,818.22	52,167
German.....	33	118,146	83,921	141,181	84,125	102,839.51	106,526
Italian.....	6	37,921	26,681	46,868	29,033	33,351.25	24,567
Japanese.....	18	94,916	80,836	121,204	80,037	96,880.64	94,959
Norwegian.....	29	130,092	85,840	142,734	86,083	103,280.16	123,510
Swedish.....	8	37,590	27,225	82,341	33,226	31,093.99	64,220
United States.....	197	1,010,264	763,183	1,243,913	760,892	907,971.85	910,061
Total, March, 1931.....	439	2,211,934	1,630,412	2,709,548	1,640,107	1,964,434.22	1,915,507
Total, March, 1930.....	515	2,505,859	1,876,772	3,103,558	1,888,586	2,260,002.36	2,558,238
Total, March, 1929.....	536	2,567,961	1,965,046	3,230,243	1,976,904	2,343,865.55	2,743,768

* Includes naval vessel of 28,000 displacement tons.

United States Intercoastal Traffic by Commodities for March, 1931.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for March, 1931, and the totals for March, 1930 and 1929. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations shall items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Agricultural implements.....	658	12	670
Alfalfa.....	584	584	584
Alfalfa meal.....	1,038	1,038	1,038
Ammonia.....	312	312	312
Asbestos.....	77	77	77
Asphalt.....	266	347	613
Automobiles.....	8,568	323	8,891
Automobile accessories.....	1,112	29	1,141
Bamboo.....	50	50	50
Barley.....	12	12	12
Beans.....	18	6,719	6,737
Borax.....	667	667	667
Bricks.....	172	172	172
Burlap.....	141	141	141
Calcium carbide.....	138	138	138
Camphor.....	25	25	25
Canned:			
Fish.....	252	9,324	9,576
Fruit.....	379	31,449	31,828
Meat.....	80	74	154
Milk.....	98	113	211
Soup.....	3,751	3,751	3,751
Vegetables.....	833	8,204	9,037
Miscellaneous and unclassified.....	1,683	9,070	10,753
Carbon black.....	40	40	40
Celite filtercd.....	232	232	232
Cement.....	205	43	248
Charcoal.....	50	100	150
Chemicals.....	3,988	1,185	5,173
China and fire clay.....	684	242	926
Coal.....	1,027	1,027	1,027
Cocoa.....	31	31	31
Coconuts.....	12	1,051	1,063
Coffee.....	573	89	662
Coke.....	1,272	1,272	1,272
Cold storage:			
Beef.....	2	2	2
Cheese.....	3	29	32
Eggs.....	465	465	465
Fish.....	240	200	440
Lard.....	153	153	153
Other.....	322	201	523
Confectionery.....	732	732	732
Cork.....	26	26	26
Corn.....	90	90	90
Cotton.....	326	3,325	3,651
Cyanide.....	168	168	168
Drugs and medicines.....	1,222	69	1,291
Dyes.....	540	540	540
Earthenware.....	99	20	119
Eggs, dried.....	7	7	7
Explosives.....	120	41	170
Fertilizer.....	45	116	161
Flour.....	263	11,342	11,605
Fruit:			
Dried.....	72	13,928	14,000
Fresh.....	379	2,048	2,427
Fuller's earth.....	33	33	33
Furniture.....	455	95	550
General.....	39,157	9,393	48,550
Glass and glassware.....	1,651	152	1,803
Glue.....	39	125	164
Granite.....	118	118	118
Guanano.....	30	30	30
Hair.....	16	41	57
Hardwoods.....	610	47	657

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Hay		775	775
Hemp	107	50	157
Honey		305	305
Hops		242	242
Infusorial earth		281	281
Ink	29		29
Jute	23	149	172
Lard substitute	928		928
Linoleum	684	64	748
Liquors	108		108
Lumber	1,159	145,235	146,394
Malt	127		127
Manufactured goods:			
Iron and steel	56,559	1,599	58,158
Machinery	3,921	433	4,354
Railroad material	170		170
Tiptate	8,640	36	8,676
Textiles	3,512	207	3,719
Miscellaneous	8,425	2,039	10,464
Marble	184		184
Matches	319	10	329
Metals:			
Copper		6,687	6,687
Iron	661	800	1,461
Lead	52	469	521
Scrap	419	361	780
Tin		106	106
Zinc	16	750	766
Other	28		28
Milk, powdered	15	779	794
Molasses	74	4	78
Musical instruments	9		9
Nitrates	1,846		1,846
Nuts	6	431	437
Oats	67		67
Oils:			
Coconut	45		45
Cottonseed	161		161
Gas oil, fuel oil		9,833	9,833
Gasoline, benzine, naphtha	74	161,446	161,520
Linseed	23		23
Lubricating and greases	8,070	784	8,854
Olive	33	22	55
Vegetable	306	375	681
Wood		29	29
Other	198	21	219
Ores:			
Copper		1,000	1,000
Magnesite		139	139
Tin		56	56
Zinc		511	511
Other		36	36
Paint	491	1,292	1,783
Paper	4,290	8,145	12,435
Paper pulp		4,695	4,695
Peanuts	720	480	1,200
Phosphates	747	234	981
Plaster		94	94
Porcelain	146	121	267
Rags		120	120
Rice	184	355	539
Rope	203	108	311
Rosin	959		959
Rubber:			
Manufactured	888	213	1,101
Raw	60		60
Scrap		136	136
Salt	89	99	188
Sand	45		45
Seeds:			
Grass		66	66
Hemp		22	22
Other		404	404
Shells	1,048		1,048
Silk		3,429	3,429
Skins and hides	28	1,621	1,649
Slate	420		420
Soap	1,852	127	1,979
Soda	82		82
Soda ash	1,324		1,324
Soda, bicarbonate	186	25	211
Soda, caustic	495		495
Starch	54		54
Sugar	81	6,054	6,135
Sulphur	14,954		14,954

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Syrup	470	10	480
Talc.	48	60	108
Tar	41		41
Tea	30	62	92
Tobacco	995	41	1,036
Toys	25	20	45
Turpentine	55		55
Vegetables		496	496
Waste	9	472	481
Wax	192		192
Wheat		89	89
Wine		127	127
Wool		1,691	1,691
Zinc oxide	31		31
Total, March, 1931	201,404	479,774	681,178
Total, March, 1930	274,396	601,300	875,696
Total, March, 1929	282,344	620,659	903,003

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending April 4, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Aneon	Panama R. R. S. S. Line		March 29.		722
Durazzo	Hamburg-American Line		March 29.		106
Tolosa	United Fruit Co.	March 29.	March 29.	12	245
Cartago	United Fruit Co.	March 29.	March 30.	142	50
Cauca	National Navigation Co.	March 29.	April 3.	157	269
Buenaventura	Panama R. R. S. S. Line	March 30.	March 30.	372	63
Fella	Navigazione Libera Triestina	March 30.	March 30.	(¹)	183
Santa Maria	Grace Line	March 30.	March 31.	150	181
San Angelo	Pacific-Atlantic S. S. Co.	March 30.	March 31.	63	(²)
Kreta	Hamburg-American Line	March 30.	March 31.	538	444
Schwaben	North German Lloyd	March 30.	March 31.	150	(²)
Abana	North German Lloyd	March 31.	March 31.	7	731
Atago Maru	Nippon Yusen Kaisha	March 31.	March 31.	174	(²)
Guadeloupe	French Line	March 31.	April 1.	139	936
San Mateo	United Fruit Co.	March 31.	April 2.	1,178	(²)
Heilo	Panama Mail S. S. Co.	March 31.	April 2.	735	(²)
Daytonian	Leyland S. S. Line	March 31.	April 1.	624	(²)
Acajutla	Pacific Steam Navigation Co.		April 1.		491
Pastores	United Fruit Co.	April 1.	April 1.	461	14
Nosa Prince	N. O. & S. A. S. S. Co.	April 1.	April 1.	96	51
Iriona	United Fruit Co.	April 1.	April 2.	919	(²)
Courageous	Roosevelt S. S. Co.	April 1.	April 2.	231	(²)
Metapan	United Fruit Co.	April 1.	April 2.	639	555
Santa Clara	Grace Line	April 2.	April 2.	195	444
California	Navigazione Libera Triestina	April 2.	April 2.	110	(²)
Canada	Johnson Line	April 2.	April 2.	(¹)	383
Oregon	French Line	April 2.	April 3.	134	450
Schwarzwald	Hamburg-American Line	April 2.	April 3.	85	89
Ares	Royal Netherlands S. S. Co.	April 2.	April 3.	163	604
Bogota	United Fruit Co.	April 2.	April 3.	174	198
Virgilio	Italian Line	April 2.	April 4.	15	895
Cali	Roland Line	April 2.		297	
Knute Nelson	Fred Olsen Line	April 3.	April 3.	(¹)	298
Caldas	National Navigation Co.	April 3.		148	
Contessa	Standard Fruit & S. S. Co.	April 3.	April 4.	203	530
Swiftscout	Arrow Oil Co.	April 3.	April 4.	11,614	(²)
Tejon	General Petroleum Co.	April 3.		10,029	
Galicia	Hamburg-American Line	April 3.		35	
Iriona	United Fruit Co.	April 4.	April 4.	(¹)	185
San Francisco	Hamburg-American Line	April 4.		105	
Santa Rita	Grace Line	April 4.		144	

¹ No cargo discharged.

² No cargo laded

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Cargo Consigned to Canal Zone for Orders.

The system of consigning cargo to the Canal Zone for orders, that is, of discharging cargo from arriving ships into warehouses operated by the Panama Railroad Company on the piers at the ends of the Canal for subsequent reshipment to other ports, was established April 1, 1925, and has been in continued and satisfactory operation since. The provisions were described in a circular published in THE PANAMA CANAL RECORD of March 18, 1925. In 1926 the Panama Railroad distributed a pamphlet containing a description of the arrangements, samples of the necessary papers, and a statement of charges involved in making use of this method of distribution. Because the charges are modified from time to time, this pamphlet became obsolete with respect to that item and it was decided to incorporate data concerning the handling of cargo for orders in the comprehensive general tariff of The Panama Canal and Panama Railroad presenting the schedule of rates for supplies and services furnished to shipping and allied interests at the Panama Canal. A reference to Canal Zone for orders cargo was included in Tariff No. 10, in effect July 1, 1930, under Item 35, Storage on Piers. Through Supplement No. 5 to Tariff No. 10, dated March 20, 1931, Item 35 has been modified effective April 1, 1931.

The revised item is published in full below:

BALBOA HEIGHTS, C. Z., March 20, 1931.

Supplement No. 5—Tariff No. 10—Item 35—Storage on Piers.

(Effective April 1, 1931.)

1. Transit cargo, routed or unrouted:

For first 35 days after delivery on pier.....	Free
For succeeding 30 days, per ton per day or fraction thereof.....	\$0.03
Thereafter, per ton per day or fraction thereof.....	.05

(All transit cargo, routed or unrouted, shall be removed in the order of arrival.)
2. Transit baggage:

For first seventy-two hours (3 days) after delivery on pier.....	Free
Thereafter, per piece per week or fraction thereof.....	.25
3. Canal Zone for Orders cargo:
 - (a) General merchandise, excepting alcoholic liquors, which is actually received from or definitely consigned for shipment in water-borne commerce, will be warehoused "for orders" at the terminal ports of the Panama Canal by the Panama Railroad Company. The Company, which is a corporation of the State of New York, with the usual rights and liabilities of a corporation, owns modern steel and concrete, fireproof, and ratproof piers at both terminals (Cristobal and Balboa); and space on these piers is available for the storage and handling of goods under the arrangement "for orders." Cold storage space to a limited extent is

available at Cristobal at rates which will be furnished on request. These storage facilities are not operated as a general warehousing business, and are not available for storage of goods originating locally unless definitely consigned beyond the Isthmus.

- (b) The essential working of this system is that goods are stored up to 35 days without charge, and after 35 days at the storage rates hereinafter specified, in custody of the Panama Railroad Company, which issues a negotiable receipt to the consignor, owner, or consignee, in exchange for negotiable bill of lading, and forwards or delivers goods on presentation of the receipt and a form order, "Authority to deliver cargo from storage on piers." Goods so received and stored may be delivered or reforwarded by the consignor, owner, or consignee, in any quantity desired, as he directs, subject to the conditions printed on the warehouse receipt.
- (c) The charges for handling and storing goods consigned to and forwarded or delivered from Canal Zone for Orders are as follows—
- (1) For handling from ship's side to storage place, or to cars, \$1 per ton on general cargo, and on other commodities, one-half of the transferring rates provided in paragraph 2, Item 34.
 - (2) For handling from storage place to ship's side, or to cars, or for delivery at storage place, the same rates as for receiving, as per (a) above. The minimum charge for handling goods withdrawn from storage place is \$1.
 - (3) Storage: First 35 days after delivery to warehouse, free; thereafter, 3 cents per ton of 2,000 pounds, or $1\frac{1}{2}$ cents per ton of 40 cubic feet per day or fraction thereof.
 - (4) Special rates on special commodities in large quantities may be obtained on request.
- (d) The charge for receiving the goods will be made against the delivering vessel; the charge for taking the goods from storage and delivering to vessels will be made against the receiving vessel. The charge for delivering goods "for orders" locally will be collected from the owner or consignee before the goods will be delivered. The charge for storage will be made against the owner of the goods and will be collected monthly.
- (e) Any rehandling of goods for fumigation or other purposes, or labor for repairing of packages, will be charged for in accordance with the rules and rates for rehandling, repairing, etc., provided in this tariff.

- (f) The Receiving and Forwarding Agent will use his discretion as to what classes of goods may or may not be received and stored under the heading of Canal Zone for Orders. No shipment of goods requiring refrigeration should be made to Canal Zone for Orders without prior definite arrangement with the Receiving and Forwarding Agent.
- (g) The Panama Railroad Company does not insure goods stored in Canal Zone for Orders warehouses. Arrangements for insurance will have to be made by the consignor, consignee, or owner of the goods.
- (h) Goods "for orders" stored on the wharves of the Panama Railroad Company for delivery or reshipment into the Republic of Panama are subject to the customs rules and laws of the Republic of Panama, and to payment of duty.
- (i) As a general policy, various lines operating out of Cristobal and Balboa to the west coast of South and Central America accept their proportion of the through rate from port of origin to port of ultimate destination for the haul beyond the Isthmus, as explained in the following paragraph—
- (j) In connection with the Canal Zone for Orders arrangement, certain steamship lines agree to through billing arrangements by which shippers are enabled to consign goods to the Isthmus and subsequently to reconsign them to any port beyond the Isthmus to which there is a through rate from port of origin without sacrificing their right to the through rate. This means that when goods move from New York to the Canal Zone, usual local rates will be charged to Cristobal or Balboa, as the case may be; but should the owner wish to reforward by water to any other port to which there is a through rate from port of origin, he may do so upon payment of the receiving carrier's proportion of the through rate from port of origin to port of ultimate destination, plus handling charges from storage place to slings of receiving vessel; and upon evidence that the shipment, or any part of it, has moved beyond the Isthmus, the initial carrier will refund the difference between its proportion of the through rate applicable and the local rate.
- (k) Under through billing arrangements agreed to by certain steamship lines, goods consigned to either terminal for orders may be reconsigned to points beyond the Isthmus and reforwarded via the Panama Railroad for transshipment at the opposite terminal upon payment of the receiving ocean carrier's proportion of the through freight rate from port of origin to port of ultimate destination, plus handling

charges from storage place to cars. The handling charges from cars to ship's side will be absorbed by the Panama Railroad Company. In this case the Panama Railroad Company's freight charges will be those specified in paragraph 24 (a), Item 34 of this tariff.

- (l) In addition to reconsigning beyond the Isthmus, when agreed to by delivering steamship lines, goods billed Cristobal for orders may be reconsigned to Balboa-Panama City or to line points on the Panama Railroad, and goods consigned Balboa for orders may be reconsigned to Cristobal-Colon or line points on the Panama Railroad, on the basis of through rates from port of origin to Panama City or Colon, as the case may be. In this case the Panama Railroad Company's charges will be the difference between the rate charged to port of steamer discharge by the ocean carrier and the through rate from port of origin to Panama City or Colon, as the case may be, and the necessary adjustments with the ocean carrier will be made by the Panama Railroad Company without inconvenience to shippers or consignees. In the absence of through rates, goods may be forwarded at regular local rates, as provided in Item 39 of this tariff.
- (m) Goods deposited in Hold for Orders Warehouse, Cristobal, which consignees desire transferred to Hold for Orders Warehouse, Balboa, will be assessed a charge of \$1 per ton on general cargo and one-half the transfer rates on other commodities for handling from warehouse into cars at Cristobal, and a second charge of the same kind for handling from cars into warehouse at Balboa. The same charge will again apply when the goods are reforwarded from, or delivered locally at Balboa. The same handling charges will apply, vice versa, on goods "for orders" discharged from vessels at Balboa.
- (n) Goods consigned Balboa for orders via Cristobal, and/or goods consigned Cristobal for orders, on which by previous arrangement the destination has been changed to Balboa for orders prior to arrival of the vessel, will be assessed one handling charge of \$1 per ton on general cargo or one-half the transfer rates on other commodities for handling from shipside across piers and into cars at Cristobal, and from cars into the Hold for Orders Warehouse, Balboa. The same charge will apply when the goods are reforwarded from or delivered locally at Balboa. The same handling charges will apply, vice versa, on goods moving under the same conditions in the opposite direction.
- (o) Goods to be warehoused "for orders" should be consigned

"Cristobal for orders" or "Balboa for orders." If the consignee named is not resident on the Isthmus the Panama Railroad Company will receipt for the goods delivered on its piers and transfer such goods to its warehouses, but will not assume any liability except as warehouseman. In case it is desired to reforward the goods or deliver them locally the Panama Railroad Company will act as agent for the owner, consignor, or consignee. The fees for these services are as follows:

Reforwarding goods—

For each outward bill of lading..... \$2.50

Delivering goods—

For each local delivery..... 2.50

- (p) There are no special forms for use in reshipping except the warehouseman's order to release the goods ("Authority to deliver cargo from storage on piers"). The shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local. Samples of the forms used, "Negotiable warehouse receipt" and "Authority to deliver cargo from storage on piers," will be supplied on request to the Panama Railroad Company, Balboa Heights, C. Z., or 24 State Street, New York City.

H. BURGESS,
Governor, *The Panama Canal*,
President, *Panama Railroad Company*.

Pan American Day.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 13, 1931.

To all concerned:

The below-quoted Proclamation of the President is published for the information of those concerned.

H. BURGESS,
Governor.

PAN AMERICAN DAY

By the President of the United States of America

A PROCLAMATION

WHEREAS the Governing Board of the Pan American Union, at the session held on Wednesday, May 7, 1930, adopted a resolution reading as follows:

WHEREAS, It would be desirable to recommend the designation of a date which should be observed as "Pan American Day" in all the Republics of America and which should be established as a commemorative symbol of the sovereignty of the American nations and the voluntary union of all in one continental community;

WHEREAS, April 14th is the date on which the resolution creating the Pan American Union was adopted;

The Governing Board of the Pan American Union

RESOLVES:

To recommend that the Governments, members of the Pan American Union, designate April 14th as "Pan American Day" and that the national flags be displayed on that date.

NOW, THEREFORE, I, HERBERT HOOVER, President of the United States of America, in order to give effect to the resolution adopted by the Governing Board of the Pan American Union, do hereby proclaim April 14 as "Pan American Day," and do hereby order that the flag of the United States be displayed on all Government buildings on that date, and do invite the schools, civic associations, and people of the United States generally to observe the day with appropriate ceremonies, thereby giving expression to the spirit of continental solidarity and to the sentiments of cordiality and friendly feeling which the Government and people of the United States entertain toward the peoples and Governments of the other Republics of the American Continent.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 28th day of May, in the year of our Lord nineteen hundred and thirty, and of the Independence of the United States of America, the one hundred and fifty-fourth.

[SEAL]

HERBERT HOOVER.

By the President:

H. L. STIMSON,
Secretary of State.

Location of Patients and Visiting Hours, at Gorgas Hospital.

The following table shows the distribution of patients in the Gorgas hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Visiting Hours.
Section "A:"	
Ward 2, Semi-private, white male.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.20 p. m.; 6.30 to 8.00 p. m.
Ward 3, American male, eye, ear, nose and throat patients.....	Tuesdays, Thursdays and Saturdays, 2.30 to 4.30 p. m., 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 4, Private rooms.....	Daily, same as Ward 2 (above).
Section "B:"	
Ward 5, Male, private rooms, American boys.....	} Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 6, Foreign, male and female, private rooms, American girls.....	
Ward 7, White females, private rooms.....	
Ward 8, Obstetrical department, white females.....	} No visitors permitted in nursery.
Nursery.....	
Section "C:"	
Ward 9, Colored, male.....	} Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 10, White foreign, male.....	
Ward 11, Colored, male (surgical).....	
Ward 12, Colored, male (medical).....	
Ward 13, Colored, male, G. U.....	
Ward 14, White, male, G. U.....	Tuesdays, Thursdays, Saturdays, Sundays, and holidays, 2.30 to 4.30 p. m.
Section "D:"	
Ward 15, American, male (surgical).....	} Tuesdays, Thursdays, Saturdays, Sundays and holidays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.
Ward 16, American, male (medical).....	
Ward 17, Colored children.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3.00 p. m.
Ward 18, White children.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 19, Colored, female (medical).....	} Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 20, Colored, female, surgical, obstetrical.....	
Isolation section.....	No visitors permitted except to visit tuberculosis patients Thursdays, Sundays and holidays, 1.30 to 3.00 p. m.

Permission to visit outside of visiting hours may be granted upon application to the Superintendent's Office. Immediate relatives of seriously ill patients will be admitted at any time by and in the discretion of the attending physician, section nurse, and in her absence, the nurse in charge.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

THE PANAMA CANAL RECORD

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at Cristobal, C. Z., under the Act of March 3, 1879.



Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., April 22, 1931. No. 38.

Cargo Through the Canal During March, 1931.

On pages 544 and 545 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in March, 1931. This cargo, segregated according to direction as compared with March, 1930, and the differences, are shown in the following tabulation:

	March, 1930.	March, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	741,986	499,617	-242,369
Pacific to Atlantic.....	1,816,252	1,415,890	-400,362
Total.....	2,558,238	1,915,507	-642,731

It will be noted from the above that the Atlantic to Pacific tonnage decreased 242,369 tons (32.7 per cent) as compared with March, 1930, and that from the Pacific to Atlantic decreased 400,362 tons (22.0 per cent), making a total decrease in cargo tonnage in both directions of 642,731 tons (25.1 cent).

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-nine (69) per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States (in comparison with 70.7 per cent of the total in March, 1930), and 22.8 per cent in Europe (21.7 per cent in March, 1930), these two areas contributing to almost 92 per cent of the cargo moving in this direction in March, 1931. In comparison with March, 1930, tonnage from the United States declined 179,633 tons, or 34.2 per cent, while that from Europe decreased 46,829 tons, or 29.1 per cent. As shown above, the percentage of the total cargo originating in the United States was slightly lower also than in March, 1930, while that coming from Europe was slightly higher in March, 1931.

Destination.—Forty-seven and eight-tenths (47.8) per cent of the Pacific-bound cargo tonnage was destined to the United States; 20.7 per cent to Asia; 12.2 per cent to Australasia; and 11.1 per cent to South America. Tonnage to all these areas decreased as follows in comparison with March, 1930: To the United States, 101,199 tons, or 29.7 per cent; to Asia, 73,783 tons, or 41.6 per cent; to Australasia, 30,212 tons, or 33.2 per cent; and to South America, 47,636 tons, or 46.1 per cent. In its relation to the total cargo, the percentage destined to the United States last month was higher than in March, 1930, while that to Asia and South America was lower in March, 1931. The percentage going to Australasia was approximately the same last month as in March, 1930.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 47.8 per cent came from the United States; 23.3 per cent from South America; 12.0 per cent from Canada; 7.5 per cent from Asia; and 7.1 per cent from Australasia. Cargo tonnage originating in Australasia showed a proportionate as well as an actual increase of 14,439 tons, or 16.6 per cent, in comparison with March, 1930, while that coming from the other before-mentioned areas decreased as follows: From the United States, 210,643 tons, or 23.7 per cent; from South America, 141,237 tons, or 30.0 per cent; from Canada, 32,820 tons, or 16.2 per cent; and from Asia, 37,895 tons, or 26.4 per cent. The percentages of the total cargo originating in the United States, South America, and Asia also declined in comparison with March, 1930, while that from Canada was higher.

Destination.—Segregated according to destination, 55.9 per cent of the cargo tonnage moving from the Pacific to the Atlantic went to the United States, and 37.1 per cent to Europe. Tonnage to the United States decreased 316,302 tons, or 28.5 per cent, in comparison with March, 1930, and that to Europe declined 81,009 tons, or 13.4 per cent. In the proportions to the total cargo, the tonnage to United States was lower and that to Europe was higher in March, 1931.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify approximately 86 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific during the month of March, 1931. The remaining 14 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for March, 1930, or March, 1931, are listed in the following tabulation, showing differences:

Commodity.	March, 1930.	March, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	
Ammonia	10,959	6,315	-4,644
Automobiles	19,549	10,110	-9,439
Cement	19,507	13,379	-6,128
Coal and coke	11,654	11,824	+170
Cotton	19,930	29,055	+9,125
Manufactured goods:			
Iron and steel	170,591	101,870	-68,721
Machinery	13,817	13,468	-349
Railroad material	14,842	6,900	-7,942
Tinplate	31,016	19,828	-11,188
Miscellaneous	19,499	17,353	-2,146
Metal, scrap	20,551	3,641	-16,910
Oils, mineral	50,935	26,614	-24,321
Paper	17,335	13,521	-3,814
Phosphates	33,905	18,302	-15,603
Silversand	11,050	.....	-11,050
Slag	15,322	6,485	-8,837
Sugar	13,290	1,770	-16,520
Sulphur	14,303	15,883	+1,580

The above 18 commodity groups for March, 1931, comprise 63.3 per cent of the cargo moving from the Atlantic to the Pacific. Except for a substantial increase in the shipments of cotton and two other smaller increases, all of the above listed commodities decreased in comparison with March, 1930.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

From the cargo declarations submitted it was possible to classify approximately 99 per cent of the cargo moving from the Pacific to the Atlantic during the month of March, 1931. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1930, are listed below:

Commodity.	March, 1930.	March, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	
Barley.....	21,662	21,935	+273
Beans.....	9,847	12,118	+2,271
Canned goods (fish, fruit, vegetables, etc.).....	83,061	79,992	-3,069
Coffee.....	23,039	19,609	-3,430
Cold storage (food products) [†]	44,077	50,239	+6,162
Copra.....	5,509	10,323	+4,814
Flour.....	9,109	17,938	+8,829
Fruit, dried.....	15,297	25,090	+9,793
Fruit, fresh.....	14,142	42,402	+28,260
Lumber.....	300,515	207,106	-93,409
Metals, various.....	64,122	58,323	-5,799
Nitrates.....	147,762	104,468	-43,294
Oils, mineral.....	420,040	285,509	-134,531
Ores, principally iron.....	230,446	93,834	-136,612
Paper.....	13,851	11,425	-2,426
Paper pulp.....	10,736	8,951	-1,785
Rice.....	12,506	11,947	-559
Sugar.....	118,316	117,721	-595
Wheat.....	150,034	110,742	-39,292
Wool.....	16,592	23,935	+7,343

[†] Does not include fresh fruit.

The above 20 commodity groups for March, 1931, comprise 92.8 per cent of the cargo moving from the Pacific to the Atlantic. Eight of the items show increases over March, 1930, while 12 show decreases. Practically all of the normally important items, such as mineral oils, lumber, ores, and wheat, registered heavy decreases. The most important increase was that of fresh fruit, the majority of which was routed from the United States to Europe.

(Continued on next page.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending April 18, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Santa Rita.....	Grace Line.....	Apr 13.....	Apr 14.....	44	2
Chateau Thierry.....	U. S. Government.....	Apr 14.....	Apr 17.....	301	38
City of Panama.....	Panama Mail S. S. Co.....	Apr 14.....	Apr 14.....	37	
Suriname.....	United Fruit Co.....	Apr 14.....	Apr 15.....	448	
Chaumont.....	U. S. Government.....	Apr 16.....	Apr 17.....		15
Colombia.....	Panama Mail S. S. Co.....	Apr 18.....	Apr 18.....	7	
Venezuela.....	Panama Mail S. S. Co.....	Apr 18.....	Apr 19.....	75	
Benjamin Franklin.....	Fred Olsen & Co.....	Apr 18.....	Apr 10.....	2,199	1
Kenowis.....	U. S. Government.....	Apr 19.....	Apr 10.....	598	14
Somme.....	U. S. Government.....	Apr 10.....	Apr 10.....	2	8
Santa Teresa.....	Grace Line.....	Apr 11.....	Apr 11.....	162	1
Cauca.....	National Navigation Co.....	Apr 11.....	Apr 11.....		25
La Perla.....	United Fruit Co.....	Apr 12.....	Apr 13.....	306	
Santa Barbara.....	Grace Line.....	Apr 13.....	Apr 13.....	12	
U. S. Grant.....	U. S. Government.....	Apr 13.....	Apr 13.....	136	5
Bulysae.....	Anglo-Saxon Petroleum Co.....	Apr 13.....	Apr 16.....	9,183	
Nosa King.....	N. O. & S. A. S. Co.....	Apr 14.....	Apr 14.....	104	
Salvador.....	Pacific Steam Navigation Co.....	Apr 15.....	Apr 15.....		1
Buenos Aires.....	Johnson Line.....	Apr 15.....	Apr 15.....	84	
Loriga.....	Pacific Steam Navigation Co.....	Apr 16.....	Apr 16.....		50
Heiyo Maru.....	Nippon Yusen Kaisha.....	Apr 17.....	Apr 17.....	60	
Virginia.....	Panama-Pacific Line.....	Apr 17.....	Apr 17.....		190
President Fillmore.....	Dollar Line.....	Apr 17.....	Apr 17.....		1

Origin and Destination of Cargo Passing Through the Panama Canal from the Atlantic to the Pacific, March, 1931.—Continued from page 543.
(Figures represent tons of 2,240 pounds)

From—	NORTH AMERICA.						SOUTH AMERICA.						AUSTRALASIA.						ASIA.					
	West coast of United States.	West coast of Canada.	West coast of Central America.	Bahia, C. Z. *	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. †	Total, South America.	Australia.	New Zealand.	Australasia. †	Total, Australasia.	Philippine Islands.	China.	Japan.	Far East. †	Total, Asia.	Grand total.	Per cent of total cargo.	
NORTH AMERICA:																								
UNITED STATES—																								
North Atlantic ports.....	149,028	230,114	297,806	160,289	10,685	1,626	438,565	514,16,898	3,758	4,819	8,577	8,565	10,764	14,923	5,703	39,935	225,629	45.1						
South Atlantic ports.....	5,418	600	6,018	65																				
Gulf ports.....	46,358	882	390	915	43,545	1,944	171	85	251	373	2,824	65												
Total, United States.....	201,404	1,112,148	1,287,981	214,832	12,694	1,797	523,816	887,19,717	3,758	4,819	8,577	8,577	11,519	22,432	57,889	10,180	102,020	345,146	69.0					
East coast of Canada.....	2,427	3,665	3,146			6,092																		
Cristobal, C. Z. *.....	2,957					6,103	1,155	1,075	461	374	1,091	4,156												
West Indies.....	159	2,335	3,789			6,283																		
Total, North America.....	206,947	7,112,429	5,076,981	233,310	13,849	2,872	984,190	1,978	23,873	3,758	8,601	12,359	11,519	22,432	57,889	10,180	102,020	371,562	74.4					
EUROPE:																								
British Isles.....	2,716	3,415	6,131	5,247			6,594					6,594												
Belgium.....	4,810	2,383	7,942	3,258	293	1,530	467	5,548				5,548												
Denmark.....	31		31																					
France.....	3,657	357	4,068	997			21	121				1,142												
Germany.....	4,007	866	760	12			5,645	463	122	243	1,666	809	3,303											
Holland.....	1,119	39	1,158	1,942	214	73	834	3,063																
Italy.....	1,449	33	402	2			86																	
Norway and Sweden.....	2,480	61	1,452	335			6,335	3,692	661	1,277	68	6,343												
Spain and Portugal.....	30	26	74				8	408				8												
Europe †.....	2,189		2,189				2,068					2,068												
Total, Europe.....	22,488	7,180	3,494	2,353			35,515	17,068	1,290	3,254	5,087	3,292	752	38,507	10,053	48,560								
East coast of South America.....	9,661	1,165				10,826						2,021												
Grand total.....	239,096	15,457	7,788	4,299	881	279,651	30,917	6,183	4,238	9,277	5,031	55,646	3,758	47,108	10,053	60,919	11,519	22,432	59,270	10,180	103,401	499,617	100.0	
Per cent of total cargo:																								
March, 1931.....	47.8	3.1	1.6	1.5	2.0	56.0	6.1	1.2	0.8	1.9	1.1	11.1	0.8	9.4	2.0	12.2	2.3	4.5	11.9	2.0	20.7	100.0	.....
March, 1930.....	45.8	1.8	0.9	0.2	1.2	49.9	6.0	0.5	0.9	1.8	4.7	13.9	4.5	7.8	.....	12.3	2.2	4.8	12.1	4.8	23.9	100.0	.....
March, 1929.....	40.3	3.5	3.0	0.1	0.2	47.1	6.4	1.4	0.4	2.2	4.2	14.6	6.0	8.9	1.0	15.9	2.3	6.1	11.3	2.7	22.4	100.0	.....

* General cargo not routed so as to allow segregation between definite ports. † Includes both local and transit cargo.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, April 18, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Corigo.....	9	00	15	12	6	04	12	14	58	12	15	52	297.2	34.4	14.0	General	204	1,572	1,011
Abron.....	12	4	25	13	6	35	12	14	54	12	15	52	381.0	52.0	21.7	General	4,856	5,732	4,131
Penayo Ivana.....	12	6	00	12	6	30	12	14	00	12	15	00	417.0	56.0	20.0	Ballast	6,756	4,844	3,226
Atiempo.....	12	6	30	12	6	35	12	16	50	British	400.0	54.0	13.0	Tyne, England	.....	6,229	4,612	
Ironbow.....	12	7	30	12	7	40	12	17	33	Danzig	621.0	70.0	20.0	Hamburg, Germany	.....	12,535	8,224	
Wittemann.....	12	9	45	12	9	55	12	17	50	American	415.0	55.7	16.6	Baltimore, Md.	.....	2,000	7,731	5,805
El Cerro.....	12	10	00	12	10	15	12	18	52	British	407.4	52.2	18.6	La Libertad, Ecua.	.....	6,046	4,326	
Treacurril.....	12	10	30	12	11	05	12	18	35	British	400.0	52.0	16.0	Cardiff, England	.....	5,790	4,067	
Braut.....	9	20	10	12	12	19	12	19	10	Dutch	200.0	33.1	12.6	Cristobal, C. Z.	.....	1,183	242	
Spinnager.....	12	13	20	12	13	25	12	20	10	Norwegian	440.0	57.4	20.7	London, England	.....	7,616	5,268	
City of Panama.....	11	15	00	13	6	00	13	13	40	American	286.1	45.0	16.0	Pto. Colombia, Col.	.....	147	3,848	2,603
Conthide.....	12	11	25	13	6	00	13	14	06	British	500.0	63.0	27.6	London, England	.....	4,995	12,821	9,507
Barneveld.....	12	6	45	13	7	15	13	16	13	Dutch	400.0	58.0	19.5	Hamburg, Germany	.....	1,770	7,820	5,980
Atlantic City.....	12	23	55	13	7	20	13	16	37	British	411.7	54.5	15.0	Avonmouth, Eng.	.....	6,555	4,659	
Seminole.....	13	8	15	13	8	30	13	17	14	American	401.0	54.2	21.11	New York, N. Y.	.....	2,513	6,972	5,002
Storanger.....	13	6	50	13	10	09	13	18	50	Norwegian	473.6	66.6	20.6	Antwerp, Belgium	.....	9,183	9,592	6,775
Buysness.....	13	11	10	13	12	15	13	20	35	British	440.3	59.5	27.9	Curacao, D. W. I.	.....	8,037	4,997	
Haxby.....	13	12	50	13	13	15	13	20	55	British	421.0	54.5	15.6	Sunderland, Eng.	.....	6,205	4,571	
Esre.....	13	13	30	13	15	00	13	21	35	German	495.0	63.0	23.5	Bremen, Germany	.....	2,553	9,905	6,656
Fakcha.....	13	18	45	14	6	05	14	14	18	British	497.0	63.0	23.0	New Zealand	.....	11,018	8,067	
Sagadahoc.....	13	21	15	14	6	15	14	14	38	American	420.5	54.2	21.4	Baltimore, Md.	.....	6,127	7,345	5,357
Amerikaland.....	13	21	30	14	7	25	14	14	18	Swedish	398.0	72.0	21.4	Tacoma, Wash.	.....	15,500	4,494	
Heranger.....	13	1	40	14	7	25	14	15	17	Norwegian	561.0	54.3	19.0	Buenos Aires, Arg.	.....	2,890	6,864	5,260
Nosa King.....	13	13	35	14	1	15	14	16	15	American	324.0	46.0	17.8	New Orleans, La.	.....	633	3,978	2,560
Cortona.....	14	1	50	14	8	20	14	16	32	British	414.4	55.7	16.0	Glasgow, Scotland	.....	928	7,424	5,398
Westmoreland.....	14	6	20	14	9	30	14	17	36	British	473.0	60.0	24.1	Falmouth, England	.....	4,551	10,423	7,456
Shamese Prince.....	14	6	25	14	10	45	14	18	44	British	441.5	60.0	23.11	New York, N. Y.	.....	5,526	9,283	6,401
Tatsuno Maru.....	14	7	45	14	12	10	14	19	28	Japanese	445.0	58.0	22.9	Baltimore, Md.	.....	6,659	8,015	5,716
Whitcom.....	14	8	20	14	12	55	14	21	50	American	409.8	54.2	22.9	Galveston, Texas	.....	5,875	6,581	4,784
Chetopa.....	14	12	10	14	14	40	14	22	50	American	324.0	46.0	22.0	New York, N. Y.	.....	3,010	9,284	6,628
La Perla.....	13	23	15	6	20	15	13	27	16	American	405.6	48.0	19.0	Cristobal, C. Z.	.....	4,033	2,261	
Columbian.....	14	22	15	6	50	15	13	46	15	American	324.0	53.9	17.6	San Francisco, Cal.	.....	6,760	4,450	
Morgenstern.....	15	6	25	15	8	05	15	15	22	Norwegian	442.7	58.8	20.0	Avonmouth, Eng.	.....	7,539	5,044	
Horace.....	15	8	45	15	9	15	15	15	56	American	445.0	58.0	20.6	Boston, Mass.	.....	4,266	6,669	6,363
Lukenbach.....	15	8	45	15	15	56	15	16	55	American	.....	.....	.....	Seattle, Wash.	.....	.....	.....

Motor ship.

Tanker.

Salvador	8	20	10	15	9	45	15	17	48	15	18	38	British	Pacific Steam Nav. Co.	215	0	33	5	16	7	Christobal, C. Z.	Champertico, Guat.	1,065	1,270	735	
Ferrieng	15	11	05	15	11	15	18	09	15	19	09	Norwegian	Fern Line	335	3	54	5	20	7	17	New Orleans, La.	Phosphate, gen.	5,580	6,615	4,859	
Buenos Aires	14	18	15	15	12	19	15	20	40	16	00	57	Swedish	Johnson Line	426	9	56	2	17	6	Stockholm, Sweden	General	2,287	7,591	5,661	
Montevideo	15	12	25	15	13	15	15	21	54	15	22	50	Japanese	Osaka Shosen Kaisha	430	0	55	0	21	5	Buenos Aires, Arg.	Cotton, wheat	3,040	7,875	5,321	
Maru	15	12	25	15	12	13	15	12	13	13	13	American	A. Ferrari	480	6	65	0	22	0	0	Cristobal, C. Z.	Towing barge	2,058	7,711	2	
Barge	15	16	45	15	16	55	16	9	25	16	11	05	American	Sun Oil Co.	480	6	53	0	17	0	Cristobal, C. Z.	Ballast	9,607	15	15	
Western Sun	16	6	00	16	6	50	16	13	40	16	14	55	British	Lyle Shipping Co.	405	0	53	0	17	0	Middlestgh, Eng.	Steel plates, etc	2,058	5,741	4,988	
Cape Cornwall	16	6	00	16	6	50	16	13	40	16	14	55	British	Lyle Shipping Co.	405	0	53	0	17	0	Middlestgh, Eng.	Steel plates, etc	2,058	5,741	4,988	
City of	16	11	15	16	11	30	16	21	14	16	22	28	British	Brit. Can. Steamships	411	5	54	1	16	0	Sydney, N. S.	Steel rails, etc.	609	6,597	4,989	
Victoria	16	5	25	16	5	10	16	22	09	17	6	11	British	Pacific Steam Nav. Co.	405	0	54	2	23	0	Hull, England	General cement	6,396	7,331	5,001	
Lorica	16	12	15	16	14	07	16	17	22	40	17	12	30	American	Grace Line	466	0	64	0	24	0	New York, N. Y.	General	1,935	10,629	6,080
Santa Maria	16	5	25	16	14	07	16	17	22	40	17	12	30	American	Grace Line	466	0	64	0	24	0	New York, N. Y.	General	1,935	10,629	6,080
Villa de	16	6	55	17	6	15	17	13	29	17	14	30	French	Messageries Maritimes	409	0	53	5	22	10	Dunkirk, France	General	1,700	7,677	5,633	
F Strasbourg	16	12	45	17	6	15	17	14	04	17	15	05	French	French Line	425	0	55	0	19	0	Havr, France	Iron, cement, etc.	1,274	6,982	4,384	
Zanon	17	5	00	17	7	25	17	14	53	17	21	40	American	Dollar Line	609	0	63	3	25	0	New York, N. Y.	General	3,604	17,054	11,842	
President	17	5	45	17	7	25	17	15	55	18	1	30	American	Panama-Pacifie Line	586	4	58	4	25	0	New York, N. Y.	General	7,369	25,254	18,170	
Fillmore	16	19	15	17	8	40	17	16	39	17	17	40	Norwegian	Fern Line	376	5	53	8	14	5	Norfolk, Va.	Ballast	6,256	4,963	16,770	
Virginia	16	19	15	17	8	40	17	16	39	17	17	40	Norwegian	Fern Line	376	5	53	8	14	5	Norfolk, Va.	Ballast	6,256	4,963	16,770	
Stemomslad	16	19	15	17	8	40	17	16	39	17	17	40	Norwegian	Fern Line	376	5	53	8	14	5	Norfolk, Va.	Ballast	6,256	4,963	16,770	
C. O.	16	19	15	17	8	40	17	16	39	17	17	40	Norwegian	Fern Line	376	5	53	8	14	5	Norfolk, Va.	Ballast	6,256	4,963	16,770	
Stillman	17	5	35	17	9	00	17	17	14	17	23	48	British	Inter. Petroleum Co.	565	0	75	6	25	0	New York, N. Y.	Ballast	16,789	9,855	16,789	
Nyhaug	17	6	35	17	9	15	17	17	55	17	19	00	Norwegian	Canadian Transport Co.	330	7	51	5	13	0	Baltimore, Md	Portland, Oreg.	4,788	3,347	4,788	
Silvervev	17	11	40	17	11	55	17	18	40	17	20	00	British	Kerr S. S. Co.	431	0	61	0	17	0	New York, N. Y.	General	3,005	9,309	6,322	
Lake Benbow	17	12	40	17	12	55	17	20	30	18	00	53	American	Ford Motor Co.	230	0	45	0	21	6	Chester, Pa.	Automobile parts	2,583	2,676	1,797	
Edgar F.	17	13	30	17	13	45	17	21	14	17	23	30	American	Lockenbach Line	425	0	57	3	28	6	Houston, Texas	General	5,353	8,508	6,648	
Luckenbach	17	14	50	17	15	10	17	23	15	18	13	45	British	N. Z. Shipping Co.	526	0	61	4	22	11	London, England	N. Plymouth, N. Z.	3,596	12,846	9,439	
Rotorua	17	14	50	17	15	10	17	23	15	18	13	45	British	N. Z. Shipping Co.	526	0	61	4	22	11	London, England	N. Plymouth, N. Z.	3,596	12,846	9,439	
Nordval	17	17	40	17	21	00	18	9	27	18	19	39	Denish	Inter. Freighting Co.	380	0	53	0	17	10	New York, N. Y.	General	3,000	6,194	4,467	
Gen. G. W.	17	17	40	17	21	00	18	9	27	18	19	39	Denish	Inter. Freighting Co.	380	0	53	0	17	10	New York, N. Y.	General	3,000	6,194	4,467	
Getty	17	13	00	18	13	00	18	20	15	18	20	15	American	U. S. Army	89	0	22	0	0	0	Cristobal, C. Z.	Ballast	8,144	6,028	8,144	
Fremont	17	20	00	18	6	25	18	13	33	18	14	25	British	R. Chapman & Sons	436	3	60	3	17	0	Tyne, England	Ballast	8,144	6,028	8,144	
Treythoe	18	00	30	18	7	35	18	14	49	18	15	50	British	Foster-Ham-Read Co.	309	9	51	0	15	0	Cardiff, England	Ballast	5,179	3,928	5,179	
Livingston	18	00	30	18	7	35	18	14	49	18	15	50	British	Foster-Ham-Read Co.	309	9	51	0	15	0	Cardiff, England	Ballast	5,179	3,928	5,179	
Roe	18	8	50	18	9	00	18	17	04	18	18	10	American	Richfield Oil Co.	462	0	60	0	20	0	Christston, S. C.	Ballast	8,491	6,065	8,491	
Manizales	12	16	25	18	9	20	18	17	51	18	19	00	German	Rohland Line	216	5	32	3	12	0	Cristobal, C. Z.	General	178	1,182	741	
West Mahwah	18	15	30	18	15	43	18	22	50	19	00	10	American	Pac. Art. & Brazil Line	410	3	51	0	19	3	Buenos Aires, Arg.	General	3,914	6,588	5,049	

1 Tanker. 2 Launch. 3 Tug. 4 Bones, coffee, nuts, cocoa, etc.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Agaworth	12	2	00	12	6	30	12	14	45	12	14	45	American	Richfield Oil Co., Calif.	429	0	59	2	26	0	Los Angeles, Calif.	Gasoline	15,581	7,790	5,615
Recorder	11	22	30	12	7	02	12	16	20	13	00	10	British	T. & J. Harrison	420	3	54	6	25	2	Vancouver, B. C.	General	7,740	6,632	4,402
Manizales	12	7	15	12	8	05	12	16	25	12	16	25	German	Rohland Line	216	5	32	3	12	0	Guanayquil, Ecuador	General	580	1,182	741
Arana	12	9	10	12	10	06	12	17	10	13	14	10	British	Pacific Steam Nav. Co.	303	4	43	0	16	0	Callao, Peru	General	1,041	2,851	1,776
Scottish	12	10	50	12	11	42	12	19	40	12	23	30	British	Anglo-Saxon Pet. Co.	441	0	57	0	27	0	London, Eng.	Kerosene	8,934	7,571	4,840
Chief	12	13	09	12	14	02	13	16	05	13	13	05	American	The Texas Co.	409	9	63	1	0	0	Los Angeles, Calif.	Gas oil	16,173	10,853	8,271
California	12	17	55	12	18	45	13	11	30	13	11	30	British	R. Chapman & Son	412	0	55	3	24	5	Vancouver, B. C.	General	9,628	6,823	4,797
Maibriton	12	17	55	12	18	45	13	11	30	13	11	30	British	R. Chapman & Son	412	0	55	3	24	5	Vancouver, B. C.	General	9,628	6,823	4,797

7 For orders.

1 Tanker.

Date	Vessel	Line	From—	Date	Vessel	Line	To—
15 17 05 16	16 8 05 16	17 35 Japanese	Tatsuma S. S. Co.	423 5	55 6 25 0	Manila, P. I.	Sugar
15 19 40 16	9 03 16	18 05 American	Tampa Intercoac Co.	426 6	56 0 29 0	Manila, P. I.	General
16 00 30 16	9 16 16	19 33 17	Royal Neth. S. S. Co.	400 6	58 0 25 4	Corral, Chile	Nitrates, general
16 8 40 16	9 39 16	19 40	Hamburg-American Line	227 5	34 4 13 0	Guayaquil, Ecuador	General
16 9 52 16	10 18 15	19 8 00	U. S. Navy	155 0	30 0	Balboa, C. Z.	(16)
16 4 30 16	10 10 16	20 35 16	Shaw, Savill & Albion	478 0	63 2	N. Plymouth, N. Z.	Frozen, general
16 7 05 16	10 38 16	20 45 16	East Asiatic Co.	390 0	53 2 28 0	London, England	Soya beans
16 11 35 16	12 38 16	21 35 16	Calmar S. S. Corp.	409 8	54 2 26 0	New York, N. Y.	Lumber
16 11 45 16	12 53 16	22 10 16	Imperial Oil Co., Ltd.	521 5	70 4 31 5	Talara, Peru	Crude oil
16 6 10 16	13 47 16	22 50 16	N. Z. Shipping Co.	551 0	70 2 29 0	Wellington, N. Z.	Frozen, general
16 12 10 16	14 16 16	23 20 16	McCormick S. S. Co.	410 5	24 3 23 5	Cruces Aires, Arg	General
16 15 15 16	14 18 02 17	23 55 17	National Navigation Co.	116 0	51 1 7 0	Pto. Armuelles	Ballast
17 8 50 17	6 50 17	13 55 17	Amer-Hawaiian Line	407 7	53 7 25 0	Seattle, Wash.	General
17 8 05 17	9 31 17	16 50 17	Galaan Corp., N. Y.	281 7	44 1 14 0	Callao, Peru	Desking mat ¹
17 10 05 17	10 52 17	18 30 17	Dimon S. S. Corp.	410 5	54 0 26 0	Seattle, Wash.	Norfolk, Va., N. Y.
17 11 50 17	12 24 17	19 55 17	Strang & Co.	380 0	53 9 25 0	Vancouver, B. C.	Lumber, general
17 14 50 17	15 52 17	23 10 18	East Asiatic Co.	425 0	56 9 26 0	Vancouver, B. C.	Lumber
17 13 37 17	18 24 18	2 50 18	U. S. Navy	384 0	64 9 26 2	Balboa, C. Z.	General
17 15 07 18	6 22 18	13 30 18	Grace Line	330 3	51 7 25 0	Valparaiso, Chile	Cruiser
18 3 00 18	7 10 18	14 40 18	Luckenbach Line	436 6	57 2 27 0	Portland, Ore.	General
18 13 20 18	14 17 18	22 00 18	Kellogg S. S. Co.	391 9	51 2 25 0	Manila, P. I.	Coco oil

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

¹ Tanker. ² Towing barge.

PORT OF CRISTOBAL

* ARRIVALS.				* DEPARTURES.			
Date	Vessel	Line	From—	Date	Vessel	Line	To—
April 13	Cuba	French Line	Havre via waypoints.	April 12	No. 9688 ¹⁷	Pan American Airways	San Salvador and waypoints.
April 13	Darien C-35 ¹⁷	Seadra Airplane Co.	Barraquilla and waypoints.	April 12	No. 669-M ¹⁷	Pan American Airways	Miami via waypoints.
April 13	Anachucua ¹⁸	United Fruit Co.	Colon, Rep. of Panama	April 12	Cristobal	Panama R. R. S. S. Line	New York via Haiti
April 14	Orinoco	Hamburg-American Line	Hamburg via waypoints.	April 12	Gestaboa	Royal Neth. S. S. Co.	Amsterdam via waypoints.
April 14	Camden	United Fruit Co.	Cruces, D. W. I.	April 13	Anachucua ¹⁸	P. W. Hamilton	Colon, Rep. of Panama.
April 14	No. 300-N ¹⁷	Pan American-Grace Airways	Pimentel via waypoints.	April 13	No. 9664 ¹⁷	Pan American Airways	Colon, R. C. P. of Panama.
April 15	Sivola	United Fruit Co.	Santa Marta, Colombia	April 15	No. 668-M ¹⁷	Pan American Airways	San Salvador and waypoints.
April 15	Magillanes	Spanish S. S. Line	Barcelona via waypoints.	April 15	Camden	United Fruit Co.	Miami via waypoints.
April 15	Dredan	United Fruit Co.	Liverpool via waypoints.	April 15	Stada	United Fruit Co.	Caracas via waypoints.
April 15	Tronca	United Fruit Co.	New York via Kingston.	April 15	Cuba	French Line	New York via Kingston.
April 15	No. 670-M ¹⁷	Pan American Airways	Miami via waypoints.	April 15	Orinoco	Hamburg-American Line	Port Limon, Costa Rica.
April 15	No. 9688 ¹⁷	Pan American Airways	San Salvador and waypoints.	April 16	Inapashua ¹⁸	A. Paparopoulos	Colon, Rep. of Panama.
April 16	Bolivar	Columbian S. S. Line	New York via waypoints.	April 16	Fronda	United Fruit Co.	Port Limon via Bocas.
April 17	Calaneres	United Fruit Co.	New Orleans via waypoints.	April 16	No. 309-N ¹⁷	Pan American Airways	Caracas via waypoints.
April 17	Contessa	Standard Fruit & S. S. Co.	New Orleans and Habana.	April 16	Zacapa	United Fruit Co.	Caracas, Colombia.
April 17	Carmelita ¹⁹	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	April 16	Dorelan	United Fruit Co.	Guantanamo, Cuba.

¹⁷ Air mail carrier. ¹⁸ Motor boat. ¹⁹ Motor schooner.

* Other than ships passing through the Canal.

Swayne & Hoyt, Inc., Renames Recently Acquired Vessels.

According to a circular issued by the United States Shipping Board under date of April 8, 1931, Swayne & Hoyt, Inc., of San Francisco, have been authorized to change the names of five ships recently purchased from the Finkbine-Guild Transportation Company, to conform with the "Point" prefix of the other units of the Swayne & Hoyt fleet. The ships were formerly owned by the Shipping Board. The ships and their new names are as follows: The *Abron* to be *Point Chico*; the *Dio* to be *Point Caleta*; the *Dochet* to be *Point Salinas*; the *Manhattan Island* to be *Point Brava*; and the *Sabotawan* to be *Point Palmas*.

These vessels were operated until recently by the Redwood Line in the Gulf-North Pacific coast trade, and are now operating over the same route under the management of Swayne & Hoyt, Inc.

Privately Owned Small Craft Not to Transport Cargo or Passengers from Ships.

THE PANAMA CANAL, DEPARTMENT OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., April 18, 1931.

To all concerned:

It has come to the attention of the Marine Superintendent that owners of small craft have been using same for the transportation of cargo and/or passengers to and from ships in the Harbor (both terminals).

Such use of privately owned equipment is contrary to the policy of The Panama Canal and will not be permitted except when Panama Canal or Panama Railroad equipment, which is maintained for the purpose, is not available, and in no case without permission of the Marine Superintendent.

C. H. WOODWARD,
Marine Superintendent.

APPROVED:

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending April 18, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Galicia	Hamburg-American Line		April 5		330
San Francisco	Hamburg-American Line		April 5		168
Santa Rita	Grace Line		April 5		304
Cali	Roland Line		April 5		127
Reliance	Hamburg-American Line		April 5		2
Pastores	United Fruit Co.	April 5	April 5	14	164
Costa Rica	Royal Netherlands S. S. Co.	April 5	April 6	13	5
City of Panama	Panama Mail S. S. Co.	April 5	April 7	1,139	(²)
Suriname	United Fruit Co.	April 5	April 9	736	(²)
Ludwigshafen	North German Lloyd	April 6	April 6	120	11
Carrillo	United Fruit Co.	April 6	April 6	421	82
Tillie Lykes	Lykes Brothers	April 6	April 6	108	12
Wananta	Standard Fruit & S. S. Co.	April 6	April 7	259	(³)
Siam	Danish East Asiatic Co.	April 6	April 7	37	349
Haarlem	Royal Netherlands S. S. Co.	April 6	April 7	289	189
Port Victor	Commonwealth & Dominion Line.	April 7	April 7	54	(²)
Colombia	Panama Mail S. S. Co.	April 7	April 8	230	750
Benjamin Franklin	Fred Olsen Line	April 7	April 8	328	16
Drechtidijk	Holland-America Line	April 7	April 8	224	377
Grunewald	Hamburg-American Line	April 8	April 8	40	23
San Vicente	Quaker Line	April 8	April 9	60	(²)
Sixaola	United Fruit Co.	April 8	April 9	256	224
Cristobal	Panama R. R. S. S. Line	April 8		3,404	
Tela	United Fruit Co.	April 8	April 9	714	31
Salvador	Pacific Steam Navigation Co.	April 8		334	
Cerigo	Hamburg-American Line	April 8		803	
Venezuela	Panama Mail S. S. Co.	April 9	April 10	643	61
Martinique	Colombian S. S. Line	April 9	April 10	33	296
Portland	Hamburg-American Line	April 9	April 10	19	245
Baralt	Royal Netherlands S. S. Co.	April 9		544	
Pacific Pioneer	Furness, Withy & Co.	April 9	April 10	(¹)	233

¹ No cargo discharged.

² No cargo laded.

³ One case.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
Ulua.....	United Fruit Co.....	April 10	April 10	Tons. 269	Tons. 97
Lochmonar.....	Royal Mail Steam Packet Co.....	April 10	April 10	1	208
Teno.....	Chilean S. S. Line.....	April 10	April 10	(¹) 20	15
Oroya.....	Pacific Steam Navigation Co.....	April 10	April 11		(²)
Ariguani.....	Elders & Fyffes, Ltd.....	April 10	April 11	3	(²)
Takai Maru.....	Osaka Shosen Kaisha.....	April 10	April 11	188	26
Spreewald.....	Hamburg-American Line.....	April 10	April 11	46	18
Cefalu.....	Standard Fruit & S. S. Co.....	April 10	April 11	213	509
Costa Rica.....	Royal Netherlands S. S. Co.....	April 10		35	
Cauea.....	National Navigation Co.....	April 10	April 11	245	185
Convallaria.....	Aluminium Line.....	April 10	April 11	250	(²)
Santa Teresa.....	Grace Line.....	April 10	April 11	83	173
Tela.....	United Fruit Co.....	April 11	April 11	141	162
Suriname.....	United Fruit Co.....	April 11	April 11	7	267
Corinto.....	Panama Mail S. S. Co.....	April 11		572	
City of Panama.....	Panama Mail S. S. Co.....	April 11		105	
Cristobal.....	Panama R. R. S. S. Line.....		April 12		654
Cerigo.....	Hamburg-American Line.....		April 12		265
Baralt.....	Royal Netherlands S. S. Co.....		April 12		143
Costarica.....	Royal Netherlands S. S. Co.....		April 12		1,269
Barneveld.....	Royal Netherlands S. S. Co.....	April 12	April 13	214	89
Este.....	North German Lloyd.....	April 12	April 13	50	375
Arana.....	Pacific Steam Navigation Co.....	April 12	April 13	13	(²)
Manizales.....	North German Lloyd.....	April 12	April 18	579	178
City of Panama.....	Panama Mail S. S. Co.....		April 13		100
Delftdijk.....	Holland-America Line.....	April 13	April 13	4	138
Emil Kirdorf.....	Hamburg-American Line.....	April 13	April 13	39	103
Wisconsin.....	French Line.....	April 13	April 14	157	183
Santa Barbara.....	Grace Line.....	April 13	April 14	201	129
Nosa King.....	N. O. & S. A. S. S. Co.....	April 13	April 14	203	124
Cuba.....	French Line.....	April 13	April 15	134	178
La Perla.....	United Fruit Co.....	April 13	April 15	786	(²)
Orinoco.....	Hamburg-American Line.....	April 14	April 15	155	40
Buenos Aires.....	Johnson Line.....	April 14	April 15	162	141
Camden.....	United Fruit Co.....	April 14	April 15	7,075	(²)
Salvador.....	Pacific Steam Navigation Co.....		April 15		1,070
Sixaola.....	United Fruit Co.....	April 15	April 15	109	446
Aconecagua.....	Chilean S. S. Line.....	April 15	April 15	33	34
Zacaapa.....	United Fruit Co.....	April 15	April 16	668	235
Iriona.....	United Fruit Co.....	April 15	April 16	787	19
Magallanes.....	Spanish S. S. Line.....	April 15		159	
Dorellian.....	Leyland S. S. Line.....	April 16	April 16	401	(²)
Loriga.....	Pacific Steam Navigation Co.....	April 16	April 16	30	160
Santa Maria.....	Grace Line.....	April 16	April 16	207	34
Bolivar.....	Colombian S. S. Line.....	April 16	April 17	36	220
Durazzo.....	Hamburg-American Line.....	April 16		394	
Baarn.....	Royal Netherlands S. S. Co.....	April 16	April 17	39	172
Zenon.....	French Line.....	April 16	April 17	101	208
Calamares.....	United Fruit Co.....	April 17	April 17	261	107
Comtessa.....	Standard Fruit & S. S. Co.....	April 17	April 18	264	633
Santa Elisa.....	Grace Line.....	April 17	April 18	225	(²)
Orinoco.....	Hamburg-American Line.....	April 18		34	
Pearl Marie.....	R. Feuillebois.....	April 18	April 18	(¹)	18½

¹ No cargo discharged.² No cargo laded.

Official Circular.

Vehicle Traffic Regulations—One-way Street.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 15, 1931.

CIRCULAR No. 717-19.—Corrected.

1. That portion of San Pablo Street from entrance to garage at 787-X north to Balboa Road is hereby designated as a one-way street for north-bound traffic.

2. Section 4 of Circular No. 717-3, dated May 18, 1921, is amended accordingly.

H. BURGESS,
Governor.

Cable Address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Hours of Departure of Passenger Trains.

Following are the hours of departure of the regular passenger trains of the Panama Railroad running between the Atlantic and the Pacific:

From Colon: Daily except Sunday, 7.00 a. m., 12.15 p. m., 4.30 p. m.; Sunday only, 9.20 a. m., 4.00 p. m.

From Panama: Daily except Sunday, 7.05 a. m., 12.20 p. m., 4.35 p. m.; Sunday only, 7.05 a. m., 6.15 p. m.

The time required for passage from one terminal to the other is 1 hour and 45 minutes.

Postal Address of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

Subscription rates, domestic, \$0.50 per year; foreign, \$1.00; address
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The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office
at Cristobal, C. Z., under the Act of March 3, 1879.



Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., April 29, 1931. No. 39.

CANAL WORK IN MARCH, 1931.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of March, 1931.

BALBOA HEIGHTS, C. Z., April 21, 1931.

*The Honorable, the Secretary of War,
Washington, D. C.*

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of March, 1931:

TRANSITS AND TOLLS.

During the month, 439 commercial vessels and 12 small nonseagoing launches under 20 tons transited the Canal. In addition to these there were 102 vessels belonging to the United States Government, 1 transit of a Panamanian Government vessel, and 3 transits of vessels solely for repairs, on which no tolls were collected, making a total of 557 transits for the month, or a daily average of all traffic of 17.97. The majority of the United States Government vessels were units of the Atlantic Fleet transiting from the Pacific to the Atlantic following the combined fleet concentration in the Gulf of Panama for maneuvers.

Tolls on the 439 commercial vessels amounted to \$1,964,434.22, and on the launches to \$45.33, a total of \$1,964,479.55, or a daily average on all traffic of \$63,370.31.

In comparison with March, 1930, commercial traffic for the past month declined 14.8 per cent in transits and 13.1 per cent in tolls assessed. In comparison with February, 1931, the past month's traffic showed a slight increase—1.8 per cent in transits and 2.5 per cent in tolls—although the daily average of both these features were lower in March than in February.

A review of traffic for the first 9 months of the current fiscal year in comparison with the same period last year shows a decrease of 10.4 per cent in transits, 6.5 per cent in Panama Canal net tonnage, 8.2 per cent in tolls collected, and 16.3 per cent in cargo passing through.

The total number of craft of all kinds transiting the Canal during the month of March in the two preceding years and in 1931 are shown in the following tabulation:

	March, 1929.	March, 1930.	March, 1931.
Commercial vessels	536	515	439
Launches (under 20 tons).....	15	7	12
Noncommercial vessels:			
United States Government.....	96	47	102
Panamanian Government.....	1	1	1
For repairs	3		3
Total.....	651	570	557

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North- bound.	South- bound.	Total.
Catun.....	8	6	14
Pedro Miguel.....	14	18	32
MiraFlores.....	15	18	33
Total.....	37	42	79

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tons of cargo carried, and tolls collected, from the commercial traffic transiting the Canal each month from the beginning of the fiscal year 1931, to the end of March, 1931, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929-30	1930-1	1929-30.	1930-1.	1929-30.	1930-1.	1929-30.	1930-1.
July.....	527	488	2,468,280	2,438,895	2,598,162	2,402,047	\$2,259,582.37	\$2,180,511.82
August....	541	465	2,558,739	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
September..	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.58
October....	564	517	2,747,949	2,584,160	2,845,643	2,394,410	2,485,897.71	2,288,982.08
November..	525	479	2,498,906	2,371,487	2,534,631	2,263,200	2,244,895.94	2,098,357.36
December..	522	495	2,548,771	2,473,626	2,524,934	2,166,884	2,309,030.88	2,192,583.85
January....	531	476	2,601,628	2,380,871	2,611,632	2,106,937	2,360,211.24	2,108,140.42
February...	491	431	2,369,255	2,134,866	2,377,900	1,930,219	2,131,386.12	1,915,902.78
March.....	515	439	2,505,859	2,211,934	2,558,238	1,915,507	2,260,002.36	1,964,434.22
Total..	4,739	4,248	22,724,648	21,255,836	23,164,653	19,387,255	20,580,233.88	18,886,246.53

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these governments, and vessels transiting solely for repairs, do not pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for March in the years 1929, 1930, and 1931, and comparison with the monthly averages for the calendar year 1930:

	March, 1929.	March, 1930.	March, 1931.	Average per month for calendar year 1930.
Number of vessels.....	536	515	439	490
Panama Canal net tonnage.....	2,567,961	2,505,859	2,211,934	2,438,406
United States net tonnage.....	1,965,046	1,876,772	1,630,412	1,826,376
Registered gross tonnage.....	3,230,243	3,103,558	2,709,548	3,025,071
Registered net tonnage.....	1,976,904	1,888,586	1,640,107	1,839,006
Tolls.....	\$2,343,865.55	\$2,260,002.36	\$1,964,434.22	\$2,178,835.41
Tons of cargo carried.....	2,743,768	2,558,238	1,915,507	2,320,662

The average daily number of transits, tonnage (Panama Canal measurement), tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for calendar year 1930.
	March, 1929.	March, 1930.	March, 1931.	
Number of transits.....	17.29	16.61	14.16	16.12
Panama Canal net tonnage.....	82,837	80,834	71,353	80,167
Tolls.....	\$75,608.57	\$72,903.30	\$63,368.85	\$71,632.95
Tons of cargo carried.....	88,508	82,524	61,791	72,296

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of March in 1929, 1930, and 1931, are shown in the following tabulation:

	Average per vessel.		
	March, 1929.	March, 1930.	March, 1931.
Panama Canal net tonnage.....	4,791	4,866	5,039
United States net tonnage.....	3,666	3,644	3,714
Registered gross tonnage.....	6,026	6,026	6,172
Registered net tonnage.....	3,688	3,667	3,736
Tolls.....	\$4,372.88	\$4,388.35	\$4,474.79
Tons of cargo (including vessels in hallast).....	5,119	4,967	4,363
Tons of cargo (laden vessels only).....	5,991	5,672	5,135

NATIONALITY OF VESSELS.

Fourteen nationalities were represented in the commercial traffic through the Canal in March, 1931. Vessels of the United States registry, with 197, led in the number of transits, while those flying the British flag, with 103, were second. Vessels

of these two nationalities made up 68.3 per cent of the total transits for the month. Vessels of German and Norwegian registry were next with 33 and 29 transits, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo through the Canal during the month of March, 1931, aggregating 1,915,507 tons, was the lowest month's cargo tonnage through the Canal since September, 1925, when 1,891,988 tons were passed through. Cargo from the Atlantic to the Pacific totaled 499,617 tons, as compared with 465,126 tons in the previous month, and 741,986 tons in March, 1930. From the Pacific to the Atlantic there were 1,415,890 tons, as compared with 1,465,093 tons in February, 1931, and 1,816,252 tons in March, 1930.

From the Atlantic to the Pacific various manufactured goods, totaling 159,419 tons, constituted the heaviest item of cargo, followed by cotton with 29,055 tons, mineral oils with 26,614 tons, phosphates with 18,302 tons, sulphur with 15,883 tons, and cement with 13,379 tons. There was a decrease of 242,369 tons, or 32.7 per cent, in cargo moving in this direction as compared with March, 1930.

From the Pacific to the Atlantic mineral oils, as in the past, constituted the leading commodity, totaling in March, 1931, 285,509 tons. This was followed by lumber with 207,106 tons, sugar with 117,721 tons, wheat with 110,742 tons, nitrates with 104,468 tons, and ores (principally iron) with 93,834 tons. All these items decreased in comparison with March, 1930, as follows: Mineral oils, 134,531 tons, or 32.0 per cent; lumber, 93,409 tons, or 31.1 per cent; sugar, 595 tons; wheat, 39,292 tons, or 26.2 per cent; nitrates, 43,294 tons, or 29.3 per cent; and ores, 136,612 tons, or 59.3 per cent. In aggregate, there was a decrease of 400,362 tons, or 22.0 per cent, in cargo routed in this direction in comparison with March, 1930.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton, nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.907 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.728 per net ton, Panama Canal measurement.

Taking traffic through the Canal for the month of March, 1931, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Diference.	
			Increase.	Decrease.
Belgian.....	\$10,238.99	\$10,819.20	\$580.21	
British.....	524,722.78	569,051.20	44,328.42	
Chilean.....	29,856.25	31,899.00	2,042.75	
Colombian.....	1,539.40	1,301.00		\$238.40
Danish.....	24,869.74	27,553.20	2,683.46	
Danzig.....	17,758.94	17,691.20		67.74
Dutch.....	30,212.50	38,353.00	8,140.50	
French.....	49,818.22	55,629.60	5,811.38	
German.....	102,839.51	115,542.80	12,703.29	
Italian.....	33,351.25	37,921.00	4,569.75	
Japanese.....	96,880.64	91,165.20		5,715.44
Norwegian.....	103,280.16	118,936.00	15,655.84	
Swedish.....	31,093.99	34,023.20	2,929.21	
United States.....	907,971.85	952,833.60	44,861.75	
Total.....	1,964,434.22	2,102,719.20	144,306.56	6,021.58
Net increase on all traffic.....			138,284.98	

* Includes \$14,000 collected for transit of naval vessel.

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States interoceanic trade.....	\$28,250.66
United States foreign trade.....	18,126.45
United States-Canal Zone trade.....	* 1,515.36
Total.....	44,861.75

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in March, 1931, is shown in the following tabulation, segregated by nationality of vessels and direction of transit; laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....		1.48	1.48
British.....	.51	1.05	.82
Chilean.....	.28	1.34	1.06
Colombian.....	.76	1.25	1.03
Danish.....	.69	1.38	.88
Danzig.....		1.76	1.76
Dutch.....	.37	1.25	.99
French.....	.41	1.37	.99
German.....	.47	1.32	.95
Italian.....	.18	1.26	.65
Japanese.....	.90	1.35	1.11
Norwegian.....	.63	1.51	1.21
Swedish.....	.94	2.86	2.24
United States.....	.69	1.33	1.05
Averages, March, 1931.....	.62	1.30	1.01
Averages, March, 1930.....	.81	1.39	1.15
Averages, March, 1929.....	.93	1.48	1.25

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of March is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	1	1,934	\$2,011.25	28	160,536	\$162,362.50
Ballast.....	34	191,486	142,351.55	2	7,984	5,748.48
General cargo ships:						
Laden.....	160	797,023	706,762.60	182	932,220	842,232.00
Ballast.....	26	119,373	87,960.39			
Noncargo-carrying ships:						
Naval.....	1		14,000.00			
Yachts.....	1	281	204.00	4	1,097	801.45
Total.....	223	1,110,097	953,289.79	216	1,101,837	1,011,144.43
Method of propulsion:						
Steam.....	156	759,889	675,518.12	155	805,462	749,330.60
Motor.....	67	350,208	277,771.67	56	293,632	259,037.18
Motor auxiliary.....				4	1,097	801.45
Sail.....				1	1,646	1,975.20
Total.....	223	1,110,097	953,289.79	216	1,101,837	1,011,144.43

Of the 311 steam-driven vessels, 230 were oil burning, 75 coal burning, and 6 either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of March, 1931. If tolls had been

assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Aircraft carriers.....				3	78,700	\$39,350.00
Aircraft tenders.....				1	3,943	4,928.75
Auxiliaries.....				1	2,809	3,511.25
Battleships.....				3	92,000	46,000.00
Cruisers.....	1	10,000	\$5,000.00	13	107,500	53,750.00
Destroyers.....				29	37,175	18,587.50
Destroyer tenders.....				2	13,448	16,810.00
Gunboats.....	2	3,000	1,500.00	2	3,150	1,575.00
Launches.....	3	30	22.50			
Mine sweepers.....	2	1,900	950.00	7	6,650	3,325.00
Patrol ships.....				2	1,000	500.00
Repair ships.....				1	3,771	4,525.20
Submarines.....	1	870	438.00	8	8,251	4,125.50
Submarine tenders.....	1	345	431.25	1	1,315	1,578.00
Supply ships.....	1	3,394	4,242.50	1	6,357	7,946.25
Tankers.....	3	17,579	21,973.75	2	11,126	13,907.50
Transports.....	1	3,992	4,990.00			
Tugs.....	2	2,000	1,000.00	3	2,969	1,484.50
U. S. Army vessels:						
Mine planters.....	1	1,208	604.00	1	1,208	604.00
Transports.....	1	3,908	4,885.00	3	11,724	14,655.00
Total, U. S. Government.....	19		46,037.00	83		237,163.45
Panamanian Government vessels:						
Transports.....	1	101	72.72			
Vessels for repairs:						
General cargo.....				1	5,042	3,630.24
Tankers.....	1	121	90.75			
Yachts.....				1	281	210.75
Grand total.....	21		46,200.47	85		241,004.44

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of March, 1931, carried cargo as follows: Atlantic to Pacific, 13,121 tons; Pacific to Atlantic, 736 tons; total, 13,857 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of March, 1931. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	10	39	\$33.75
Pacific to Atlantic.....	2	16	11.58
Totals.....	12	55	45.33

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of March, 1931, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	69,369	8,568	77,937
Local cargo shipped..... tons..	6,990	548	7,538
Transit cargo arriving..... tons..	1,959,599	1,925,110	3,884,709
Transit cargo clearing..... tons..	1,957,189	1,915,506	3,872,695
Cargo received for transshipment..... tons..	31,002	449	31,451
Cargo transhipped..... tons..	28,977	280	29,257

	Cristobal.	Balboa.	Total.
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	104	48	152
Number of releases issued.....	796	449	1,245
Tons received.....	6,627	4,327	10,954
Tons withdrawn.....	7,693	4,352	12,045
Packages received.....	1,370	371	1,741
Packages withdrawn.....	1,503	384	1,887
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	28		28
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons..	12,424		12,425
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	104	7	111
U. S. Army, including vessels..... tons..	235		239
Individuals and companies..... tons..	59		59
Transferred to Navy..... tons..	10,007		10,007
Total sales and issues..... tons..	22,829	7	22,836
Coal on hand, March 1, 1931..... tons..	43,472		43,472
Coal on hand, April 1, 1931..... tons..	39,577		39,577
Coal received during month..... tons..	18,934		18,934
Coal received from Navy..... tons..		7	7
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls..	9,125.60	19,613.04	28,738.64
Panama Railroad Company..... bbls..	964.30	735.00	1,699.30
U. S. Army and Navy..... bbls..		313.67	313.67
Total sales and issues..... bbls..	10,089.90	20,661.71	30,751.61
Fuel oil on hand, April 1, 1931..... bbls..	65,303.91	43,276.62	108,580.53
Fuel oil loaned to 15th Naval District..... bbls..	7,486.60		7,486.60
Diesel oil borrowed from Union Oil Company..... bbls..	189.00		189.00
Diesel oil issued during March, 1931..... bbls..	189.00	2,549.25	2,738.25
Diesel oil on hand, April 1, 1931..... bbls..	1,083.28	32,650.13	33,733.41
Miscellaneous transfers..... bbls..	512.73	592.18	1,104.91
Gasoline and kerosene pumped for The Panama Canal..... bbls..	2,839.57	5,928.61	8,768.18
Gasoline pumped for individuals and companies..... bbls..	694.21	8,211.65	8,905.86
Oil pumped for individuals and companies:			
Receipts..... bbls..	175,940.16	321,534.51	497,474.67
Issues..... bbls..	226,506.84	253,201.98	479,708.82
Oil pumped for U. S. Navy..... bbls..	36,833.78	110,650.00	147,483.78
Total fuel oil, gasoline, and kerosene handled..... bbls..	453,606.19	723,329.89	1,176,936.08
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	15	2	17
Measured for Panama Canal net tonnage.....	4		4
Re-measured for Panama Canal net tonnage.....	13	1	14
Panama Canal net tonnage corrected.....	2	3	5
U. S. equivalent tonnage corrected.....	8	2	10
Services of harbor equipment:			
Tugs, total operating hours.....	370 $\frac{1}{2}$	339 $\frac{1}{2}$	709 $\frac{1}{2}$
Launches, total operating hours.....	1,312 $\frac{1}{2}$	1,824 $\frac{1}{2}$	3,137
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$12,537.50	\$11,261.25	\$23,798.75
Pilotage.....	19,320.00	11,015.00	30,335.00
Seamen.....	10,408.00	10,096.00	20,504.00
Launch service.....	1,895.50	3,346.00	5,241.50
Wharfage.....	16,841.63	6,420.81	23,262.44
Ships measured.....	110.00		110.00
Miscellaneous.....	406.58	652.50	1,059.08
Ships repaired at Panama Canal shops:			
Commercial.....	27	7	34
U. S. Army and Navy.....	7	6	13
Panama Canal equipment.....	4	9	13
Total.....	38	22	60
Vessels dry-docked:			
Commercial.....	6	3	9
U. S. Army and Navy.....	4	4	8
Panama Canal equipment.....		5	5
Total.....	10	12	22
Clearances issued.....	270	233	503
Bills of health issued.....	323	300	623

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal.	571	3,721,200	2,429,323	471	2,895,775	1,780,558
Vessels entering port but not transiting Canal.	70	481,147	282,452	8	35,205	23,075
Vessels transiting Canal and handling passengers and cargo at terminal ports.	131	862,218	514,358	105	648,036	386,054
<i>Ships clearing.</i>						
All vessels, including those transiting Canal.	575	3,722,659	2,432,073	593	3,651,414	2,536,073
Vessels clearing port but not transiting Canal.	73	492,276	291,473	65	397,015	382,679
Vessels transiting Canal and handling passengers and cargo at terminal ports.	131	868,171	517,890	106	654,490	389,201

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
<i>Disembarking:</i>						
From Atlantic ports.	1,012	865	1,877	97	157	254
From Pacific ports.	275	133	408	284	239	523
Total disembarking.	1,287	998	2,285	381	396	777
<i>Embarking:</i>						
For Atlantic ports.	1,041	923	1,964	243	579	822
For Pacific ports.	162	113	275	273	318	591
Total embarking.	1,203	1,036	2,239	516	897	1,413
<i>Remaining on board:</i>						
From Atlantic to Pacific ports.	1,210	1,679	2,889	1,352	1,767	3,119
From Pacific to Atlantic ports.	1,953	2,293	4,246	2,010	1,904	3,914
From Atlantic to Atlantic ports.	3,964	135	4,099			
From Pacific to Pacific ports.				10	34	44
Total remaining on board.	7,127	4,107	11,234	3,372	3,705	7,077
Total arriving.	8,414	5,105	13,519	3,753	4,101	7,854
Total departing.	8,330	5,143	13,473	3,888	4,602	8,490

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.	223	53	23.8
Pacific to Atlantic.	216	75	34.7
Total.	439	128	29.2

In addition to the aforesaid, 62 passenger-carrying vessels called at the port of Cristobal and 3 at Balboa without transiting the Canal, making a total of 193 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of March, 1931, 40 commercial airplanes entered and cleared at Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of March, 1931, together with the total sales in the corresponding month in 1930 and 1929:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
<i>Sales at Cristobal to:</i>						
Commercial vessels.	\$1,812.30	\$9,044.17	\$19,677.05	\$78.02	\$6,605.10	\$37,216.64
Government vessels.	718.80	3,595.73	17,219.09	40.16	2,942.24	24,516.02
P. R. R. vessels.	2.40	261.69	116.85	563.79	33.12	977.85
Total sales, March, 1931.	2,533.50	12,901.59	37,012.99	681.97	9,580.46	62,710.51
Total sales, March, 1930.	3,105.33	18,043.72	54,082.14	928.22	12,597.57	88,756.98
Total sales, March, 1929.	3,614.90	17,718.48	48,640.74	862.62	11,471.96	82,308.70

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Balboa to:						
Commercial vessels.....	297.21	1,235.36	9,450.66	881.90	9,602.58	21,467.71
Government vessels.....	3,138.40	13,249.94	81,183.47	2,277.76	24,904.44	124,754.01
Total sales, March, 1931....	3,435.61	14,485.30	90,634.13	3,159.66	34,507.02	146,221.72
Total sales, March, 1930....	1,173.98	11,366.74	28,746.90	1,646.35	8,281.41	51,215.38
Total sales, March, 1929....	3,759.63	21,403.75	56,252.67	1,110.91	9,884.59	92,411.55

The aggregate sales to Government vessels during the month was \$149,270.03; to Panama Railroad vessels, \$977.85; and to other commercial vessels, \$58,684.35; making the total sales to all vessels \$208,932.23. The figures are subject to minor change on final audit.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of March, 1931, as compared with the corresponding month in 1930 and 1929:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. ¹			Mar., 1929.	Mar., 1930.	Mar., 1931.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	205	212	417	47	10	57	539	511	474
Pedro Miguel.....	212	223	435	51	15	66	530	534	501
Miraflores.....	212	220	432	49	14	63	512	511	495
	Number of vessels put through locks.								
Gatun.....	217	223	440	119	38	157	671	592	597
Pedro Miguel.....	216	226	442	105	45	150	713	607	592
Miraflores.....	216	226	442	106	45	151	714	610	593

¹ Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	116	104	104
Panama Canal equipment.....	14	32	33
Launches (under 20 tons).....	23	11	11
Panamanian Government vessels.....	1		
Vessels for repairs.....	3	3	3

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in March, 1931, as compared with the preceding month and the corresponding month in 1930:

	Gatun.	Pedro Miguel.	Miraflores.
Lockages.....	<i>Cubic feet.</i> 1,792,210,000	<i>Cubic feet.</i> 1,142,160,000	<i>Cubic feet.</i> 1,140,510,000
Leakage.....	30,000,000	133,000,000	160,000,000
Maintenance.....			4,060,000
Total, March, 1931.....	1,822,210,000	1,275,160,000	1,304,570,000
Total, February, 1931.....	1,756,740,000	982,380,000	984,580,000
Total, March, 1930.....	1,363,910,000	1,231,310,000	1,325,480,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of March, 1931, are shown in comparative form in the following tabulation:

	March.		March—Years of record.		
	1930.	1931.	Maximum.	Minimum.	Mean.
Discharge of Chagres River at Alhajuela.....	C. f. s. 476	C. f. s. 781	C. f. s. 1,625	C. f. s. 382	C. f. s. 728
Maximum momentary discharge for the month.....	622	5,522	19,400	.....	.....
Gatun Lake watershed, total yield.....	578	1,482	1,792	493	1,104
Gatun Lake watershed, net yield.....	-329	728	823	-402	133
Draft on Gatun Lake for lockages and power.....	2,416	2,195	2,740	* 1,148	* 1,998

* March 31, 1910. * 1914 excluded.

The monthly mean discharge of the Chagres River at Alhajuela for March, 1931, was 781 c. f. s., which is 7 per cent above the 30-year average of 728 c. f. s. The maximum monthly mean discharge on record for March is 1,625 c. f. s. in 1910, and the minimum is 382 c. f. s. in 1912. A rise of 3.6 feet occurred on the 23d due to general rains over the Isthmus. The maximum momentary discharge for the month was 5,522 c. f. s. at elevation 95.24 feet on the 23d, and the minimum was 448 c. f. s. at elevation 91.55 feet on the 20th and 21st. The maximum momentary discharge on record for March is 19,400 c. f. s. at elevation 99.40 feet on March 31, 1910, and the minimum is 303 c. f. s. at elevation 91.21 feet on March 31, 1926.

Gatun Lake varied in elevation during March from a maximum of 84.69 feet on the 1st and 2d to a minimum of 83.73 feet on the 31st. The total yield on Gatun Lake watershed was 1,482 c. f. s., which is 34 per cent above the 18-year March average, and, incidentally, this is the first month in two years in which the total yield has been appreciably above the average. The maximum total yield on record for March is 1,792 c. f. s. in 1915, and the minimum is 493 c. f. s. in 1926.

Miraflores Lake varied in elevation between a maximum of 54.25 feet on the 23d, and a minimum of 53.00 feet on the 4th. The mean elevation for the month was 53.62 feet and at midnight on the 31st the lake elevation was 53.75 feet.

SEISMOLOGY.

Seven seismic disturbances were recorded during the month—on the 1st, 4th, 6th, 8th, 18th, and 31st. The disturbance on the 31st had its epicenter in Managua, Nicaragua. It was destructive, causing great loss of life and property in Managua, but it was not felt in the Canal Zone.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 3,914,400 kilowatt hours, and the computed water consumption was 2,943,945,662 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 2,405,700 kilowatt hours, and the fuel oil consumption was 4,750.45 barrels. This station continued to carry a 2-engine load of approximately 5,200 kilowatts for the purpose of water conservation until the 15th of the month at which time one engine was taken off the line and the other engine carried an approximate load of 2,600 kilowatts until the 24th, when the remaining engine was shut down.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 33 vessels during the month. There were 339 work orders issued during the month, as compared with 346 issued during the previous month.

MECHANICAL DIVISION.

During the month of March, 1931, miscellaneous repairs were made on 38 vessels at Cristobal and 22 at Balboa. Ten vessels were dry-docked at Cristobal, and 12 at Balboa. The U. S. S. *Rochester* was docked for general overhaul. Extensive repairs to hull of the M. S. *Yomachichi* were completed during the month. Work was completed on the annual overhaul of the Panama Canal tug *Gorgona*.

MUNICIPAL ENGINEERING DIVISION.

On the Thatcher Highway under construction from the west bank of the Canal opposite Balboa to the Zone boundary line near Arraijan, 8,089 cubic yards of grading were completed, 3 culverts constructed, abutments of bridge at station 148 were completed, headwalls for 10 culverts were constructed, and 1,125 cubic yards of rock were crushed. On the Paraiso-Summit road cut-off, 10,580 square yards of 18-foot reinforced concrete road were constructed. In connection with the municipal improvements at the Naval Air Station, Coco Solo, 1,000 square yards of earth were graded, 150 cubic feet of excavation completed, and 1,010 square yards of 6-inch concrete pavement laid.

Work on several improvement projects in the cities of Colon and Panama, and in the Canal Zone, was carried on.

The usual work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 840,709,500 gallons.

DREDGING DIVISION.

The general movement along the waterfront of west Culebra slide continued throughout the month with an average movement of 1.2 feet toward the Canal between stations 1770-00 and 1792-00 W., and 1.6 feet southward between stations 1770-00 and 1776-00 W. A dredge worked $4\frac{1}{2}$ days on this slide removing 9,250 cubic yards. The reference points on this slide showed no movement. There were no other slides or any new bank breaks in the Cut during the month. There was no interference with shipping on account of slides during the month.

A suction dredge worked the entire month in area "Y" of the Folks River borrow pit, excavating a total of 161,000 cubic yards of sand, coral, and blue clay. This material was pumped to the Colon fill with the assistance of the relay pump barge through an average pipe-line length from the dredge to relay of 1,433 feet and from the relay to the dump of 4,356 feet, a total of 5,789 feet. The total amount of material removed from the pit to date is 623,800 cubic yards, of which 384,400 cubic yards remained in place, giving a run-off of 38.4 per cent. The area of the completed fill is 23.5 acres.

The total excavation during March, 1931, was 1,084,950 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
Work excavation:			
Canal prism, Gaillard Cut—			
Project No. 3.....	10,150	44,250	54,400
Project No. 5.....	10,200	40,900	51,100
Maintenance.....	43,400	10,800	54,200
West Culebra slide.....	1,850	7,400	9,250
Canal prism, Pacific entrance—			
Project No. 1.....	114,000		114,000
Maintenance.....	641,000		641,000
Plant excavation:			
Colon fill.....	161,000		161,000
Total.....	981,600	103,350	1,084,950

The ferry operating at the north end of Pedro Miguel locks functioned 31 days during the month. One thousand three hundred and eighty-six (1,386) single trips were made, and 193 Panama Canal, 1,336 U. S. Army, and 7,706 other vehicles, a total of 9,235, were ferried across the Canal.

MADDEN DAM PROJECT.

Preliminary designs from the Madden Dam, prepared by the United States Bureau of Reclamation in consultation with the Designing Engineer of The Panama Canal, were completed and a preliminary announcement was issued to contractors who may be interested in submitting bids. It is expected that detailed plans and specifications will be completed in time to permit advertising for bids about July 1, 1931.

On the Isthmus, construction of concrete footings for the Summit-Madden Dam electric transmission line progressed at the rate of one tower a day. Clearing of the right-of-way, and grading of roads and trails for use in delivering the steel for the towers to each particular site also progressed. Studies of water supply, sewer system, and garbage disposal for Madden Dam camp were continued; estimates of cost of Government inspection of camp buildings (in the event dam and power plant be built by contract), and of cost of camp for construction by force account (should that method be adopted) were in the course of preparation. Work of a miscellaneous nature, consisting of surveying, silt investigation, seepage investigation, gauging, geological investigation, clearing, etc., was continued during the month.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on March 31, 1931, was 24,118, composed of 8,142 Americans, 2,923 of whom are men, 2,445 women, and 2,774 children; 177 Europeans, 86 of whom were men, 31 women, and 60 children; and 15,799 West Indians, 4,387 of whom were men, 2,832 women, and 8,580 children. The total number of persons in quarters on March 31, 1930 was 22,552.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of March 18, 1931, with a comparison of the working force for the preceding month and for March, 1930:

	Total employees.		As of March 18, 1931.		
	March, 1930.	February, 1931.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	151	120	56	67	123
Electrical.....	376	401	169	233	402
Municipal Engineering.....	879	1,193	97	1,128	1,225
Lock Operation.....	981	1,858	348	1,577	1,925
Dredging.....	1,253	1,203	200	997	1,197
Madden Project.....	1,195	201	20	382	402
Mechanical.....	1,412	1,312	459	877	1,336
Marine.....	965	858	198	668	866
Fortifications.....	413	315	20	259	279
Total.....	7,625	7,461	1,567	6,188	7,755
Supply Department:					
Quartermaster.....	2,355	1,841	198	1,607	1,805
Commissary.....	1,558	1,622	235	1,485	1,720
Cattle Industry—Plantations.....	116	212	2	214	216
Hotel Tivoli.....	129	127	8	116	124
Hotel Washington.....	118	112	8	100	108
Transportation.....	333	325	80	242	322
Total.....	4,609	4,239	531	3,764	4,295
Accounting Department.....					
Health Department.....	211	209	205	6	211
Executive Department.....	1,153	1,130	281	868	1,149
Total.....	851	878	547	339	886
Total.....	2,215	2,217	1,033	1,213	2,246
Panama Railroad Company:					
Superintendent.....	365	311	45	256	301
Transportation.....	186	190	63	131	194
Receiving and Forwarding Agency.....	1,388	1,343	81	1,231	1,312
Coaling Stations.....	343	258	38	244	282
Total.....	2,282	2,102	227	1,862	2,089
Grand total, March, 1930.....	16,731				
Grand total, February, 1931.....		16,019			
Grand total, March, 1931.....			3,358	13,027	16,385

Additions to the gold force on the Isthmus in March were as follows: Employed in the United States, 1; reemployed in the United States, 1; employed on the Isthmus, 8; reemployed on the Isthmus, 1; total, 11. Separations from the gold force totaled 45, as follows: Resigned, 7; discharged, 34; retired, 3; died, 1. At the end of the month there were on file 800 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 172 deaths occurred during the month of March, 1931, among the population of the Canal Zone, and the cities of Panama and Colon (total population, 143,636), which is equivalent to an annual death rate of 14.37 per 1,000 population. The leading causes of death were: Tuberculosis (various organs), 28; pneumonia (broncho and lobar), 20; organic diseases of the heart, 12; cancer (various organs), 10; and nephritis (acute and chronic), 10. There were 9 deaths from diarrhea and enteritis, 8 from apoplexy, 2 from leprosy, and 1 each from meningococcus meningitis, chicken pox, and tetanus. There were 30 deaths among nonresidents, which are not included in the above statistics.

There were 337 live births and 13 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 29.24. Deaths among children under 1 year of age numbered 26, giving an infant mortality rate based on the number of live births reported, of 77.15.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during the month was 105, of whom 7 were employees (3 white and 4 colored), 16 were members of employees' families (2 white and 14 colored), 15 were Canal Zone agriculturists, 33 were other civilian nonemployees, and 34 were Army

and Navy personnel. Of the 23 employees and members of employees' families, 19 were probably infected outside our sanitized areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick.

There was one death from malaria among residents—a child living in Panama.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$230,279.69, of which \$211,544.15 was for the Department of Operation and Maintenance, and \$18,735.54 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material, amounted to \$43,108.84.

FINANCIAL STATEMENT.

The following statement shows in condensed form the aggregate revenue and expenditures for the month of February, 1931, as compared with February, 1930, with the figures for the first 8 months of the current fiscal year as compared with the same period in the fiscal year, 1930.

It is impossible to submit figures for the month of March at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	February, 1930.	February, 1931.	To end of February.	
			Last year.	This year.
Tolls.....	\$2,131,391.37	\$1,915,915.86	\$18,320,164.72	\$16,920,963.10
Other receipts.....	336,534.82	370,663.02	2,885,781.08	2,793,718.35
Total transit revenues.....	2,467,926.19	2,286,578.88	21,205,945.80	19,714,681.45
Total transit expenses.....	1,081,237.90	1,268,672.75	8,772,752.26	9,343,116.38
Net transit revenues.....	1,386,688.29	1,017,906.13	12,433,193.54	10,371,565.07
Three per cent capital charge...	623,502.66	625,761.31	4,968,809.80	5,008,721.65
Transit surplus.....	763,185.63	392,144.82	7,464,383.74	5,362,843.42
Business revenues.....	1,948,250.19	1,370,458.99	13,202,533.50	12,013,953.88
Business expenses.....	1,855,610.31	1,299,927.56	12,475,766.84	11,457,943.09
Net business revenues.....	92,639.88	70,531.43	726,766.66	556,010.79
Three per cent capital charge.....	62,967.84	65,523.63	526,569.47	546,862.61
Business surplus.....	29,672.04	5,007.80	200,197.19	9,148.18
Combined revenues.....	4,105,700.39	3,318,320.39	31,768,729.46	29,166,663.69
Combined expenses.....	2,626,372.22	2,229,882.83	18,608,769.26	18,239,087.83
Net revenues.....	1,479,328.17	1,088,437.56	13,159,960.20	10,927,575.86
Three per cent capital charge.....	686,470.50	691,284.94	5,495,379.27	5,555,584.26
Combined surplus.....	792,857.67	397,152.62	7,664,580.93	5,371,991.60

Respectfully,

H. BURGESS,
Governor.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 23, 1931.

No. 872.

Caribbean Sea, Jamaica, Portland Point, new lighthouse established. The American Consul at Kingston, Jamaica, reports the inauguration about May 1, 1931, of a new lighthouse at Portland Point, situated at the southernmost point of the island of Jamaica:

Latitude, 17° 44' 29" north; longitude, 77° 9' 58" west; color, white; characteristic, group flashing—2 flashes in quick succession every 15 seconds.

Visibility, 20 miles; elevation of focal plane above high water, 665 feet; height of tower, 132 feet.

Remarks: Unattended automatic acetylene light.

H. BURGESS,
Governor.

Improved Discharge Berth for Tank Ships at Balboa.

The old oil crib at Balboa for discharging tankers, designated as Dock No. 2, near buoy No. 17 in the Pacific sea level section of the Canal, was abandoned on August 15, 1930, and operations were transferred to Dock 4, opposite lighted beacon No. 19 $\frac{1}{2}$. The pipe lines connecting Dock 4 with the pumping plant of the tank farm have greater capacity than those which had been used for Dock 2. Comparison of the connections is as follows:

Service of pipe line.	Former Dock 2.		Present Dock 4.	
	No. of lines.	Diameter of lines.	No. of lines.	Diameter of lines.
		<i>Inches.</i>		<i>Inches.</i>
Fuel oil.....	2	10	2	12
Diesel oil.....	1	6	1	10
Gasoline.....	1	8	1	8
Kerosene.....	1	4	1	6

Experience since the change was made has shown that tankers can be discharged with appreciably greater rapidity from the new berth. Vessels can be bunkered there when desired, though most of the bunkering is done at the regular commercial docks.

Dock 4 is known among the older employees of the Canal as "the old French wharf." It was built in 1899 by the second French Canal company for the Panama Railroad Co., which previously had used the "American wharf" and "English wharf" in Panama City, handling cargo in lighters. The railroad company ceased to use the pier for cargo on August 10, 1916. Five hundred feet of the structure, comprised in the 5 southern bays, were demolished in 1927, and the superstructure was removed from the deck of the remaining 492.12 feet.

"Reina del Pacifico" Arrives at Canal on Maiden Voyage.

The new quadruple screw motor ship *Reina del Pacifico*, of the Pacific Steam Navigation Company arrived at Cristobal on April 25, 1931, on her maiden voyage in the company's service between Europe and the west coast of South America. She transited the Canal on the 26th and sailed the same day for Valparaiso, via intermediate ports. The new vessel has an over-all length of 574 $\frac{1}{8}$ feet, a beam of 76 feet, and is of 17,800 gross tons; she is the largest ship in the passenger trade along the west coast of South America. Designed to make a speed of 19 knots, the new vessel will make the voyage between Liverpool and Valparaiso in 27 days, as compared with 34 days required of the "O" boats of the company plying in this trade. Accommodations are provided for 880 first, second, and third-class passengers. The time from Valparaiso to Balboa will be 8 days, and from Cristobal to Liverpool, 17 days.

Other vessels of the Pacific Steam Navigation Company engaged in the trade between Europe and the west coast of South America are the *Orduna*, *Orbita*, *Oroya*, *Oropesa*, *Orcoma*, and *Orita*, all combination passenger and freight vessels.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, April 25, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.						
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.					
Corinto	11	23	25	19	5	55	19	14	19	15	25	American.	Panama Mail S. S. Co.	261	0	40	0	33	6	Ballast.	2,917	6,352	1,549	
Dakota	18	21	25	19	6	10	19	13	19	14	10	American.	Amer.-Hawaiian Line.	404	0	53	7	19	0	General.	2,917	7,156	5,064	
Brand	19	00	19	19	6	40	19	13	52	19	17	Norwegian.	J. I. Moore & Co.	380	5	54	0	14	0	Ballast.	2,917	6,864	5,131	
Haney	19	4	05	19	7	20	19	12	40	19	16	American.	Norton, Lilly & Co.	440	0	56	0	16	0	Ballast.	2,917	8,310	6,005	
Stacia	19	4	05	19	8	00	19	13	34	19	14	American.	U. S. Navy.	149	3	30	0	0	0	Towing barge.	2,917	8,310	6,005	
Pacific	19	10	55	19	11	05	19	18	10	19	18	American.	Dimon S. S. Corp.	399	0	54	7	20	0	General.	5,400	6,138	4,354	
Cedar	19	10	55	19	11	05	19	18	10	19	18	American.	Dimon S. S. Corp.	399	0	54	7	20	0	General.	5,400	6,138	4,354	
Gerrude	19	23	50	20	6	05	20	13	10	20	14	Danish.	Ishrandtsen Moller Co.	418	9	54	7	24	0	General.	7,285	7,385	5,500	
Maersk	19	23	50	20	6	05	20	13	10	20	14	Danish.	Ishrandtsen Moller Co.	418	9	54	7	24	0	General.	7,285	7,385	5,500	
Muncaster	20	00	25	20	7	10	20	14	30	20	16	British.	Barber S. S. Line.	428	0	56	1	23	10	General.	4,690	7,596	5,159	
S-11	20	00	25	20	7	30	20	15	14	20	16	American.	U. S. Navy.	231	0	21	10	0	0	Ballast.	2,917	6,864	5,131	
S-13	20	00	25	20	7	30	20	15	14	20	16	American.	U. S. Navy.	231	0	21	10	0	0	Ballast.	2,917	6,864	5,131	
Buffalo	20	8	50	20	9	00	20	16	39	20	18	American.	Nelson Line.	324	0	46	2	19	0	General.	2,797	3,985	2,630	
Adolf von	20	4	20	20	11	40	20	18	56	20	20	German.	Hamburg-American Line	409	10	53	0	19	1	General.	2,361	7,173	5,504	
Bayer	19	18	40	20	12	45	20	19	49	21	17	20	American.	Panama Mail S. S. Co.	380	6	48	7	21	0	General.	2,140	5,926	4,178
Ecuador	20	12	10	20	13	40	20	22	20	21	2	40	British.	Federal Steam Nav. Co.	520	0	64	2	18	0	Ballast.	2,917	12,963	9,265
Norfolk	19	23	28	21	6	04	21	14	38	21	17	55	Columbian.	National Navigation Co.	107	0	22	0	8	3	General.	70	262	161
Cauca	20	17	25	21	6	03	21	14	47	21	16	15	Dutch.	Holland-America Line.	469	4	58	4	19	1	General.	3,220	8,515	6,060
Kinderdijk	20	17	25	21	6	03	21	14	47	21	16	15	Dutch.	Holland-America Line.	469	4	58	4	19	1	General.	3,220	8,515	6,060
City of	21	2	30	21	6	15	21	15	23	21	16	45	British.	Ellerman & Bucknall.	442	0	58	0	23	0	General.	3,217	9,085	6,933
Tokio	21	2	30	21	6	15	21	15	23	21	16	45	British.	Ellerman & Bucknall.	442	0	58	0	23	0	General.	3,217	9,085	6,933
Irisbanku	21	2	45	21	7	00	21	16	14	21	20	15	British.	Andrew Weir & Co.	426	0	57	0	18	0	General.	2,368	7,623	5,356
Hakutsu	21	2	45	21	7	00	21	16	14	21	20	15	British.	Andrew Weir & Co.	426	0	57	0	18	0	General.	2,368	7,623	5,356
Maru	21	6	15	21	7	35	21	16	43	21	17	45	Japanese.	Taishima Shokai.	411	0	55	0	27	9	General.	8,182	7,064	5,175
Guayaquil	20	13	40	21	9	55	21	17	14	21	18	15	American.	Panama R. R. S. S. Line	251	0	43	6	17	6	General.	489	2,874	1,944
Dorothy	21	12	20	21	12	30	21	19	30	23	1	25	American.	Arrow Line.	410	0	54	2	20	0	General.	3,800	6,579	4,810
Cabill	21	12	35	21	13	00	21	20	43	21	22	20	American.	Argonaut S. S. Co.	440	0	56	0	22	0	General.	6,227	8,324	6,036
Pomona	21	13	15	21	14	25	21	21	48	22	2	14	British.	Eagle Oil & Ship'g Co.	407	1	52	2	26	8	General.	7,584	6,239	4,350
San Roberto	21	13	15	21	14	25	21	21	48	22	2	14	British.	Eagle Oil & Ship'g Co.	407	1	52	2	26	8	General.	7,584	6,239	4,350
Point Arena	22	00	05	22	6	15	22	13	57	22	14	50	American.	Swayne & Hoyt.	324	0	46	2	22	10	General.	3,817	4,983	2,612
Paul	22	4	50	22	6	35	22	14	52	22	15	45	American.	Luekenbach Line.	471	1	59	2	18	6	General.	4,176	9,027	6,539
Luckenbach	22	6	25	22	7	25	22	15	45	22	16	35	Norwegian.	Anglo-Saxon Pet. Co.	400	5	59	5	21	3	Ballast.	8,207	5,572	5,572
Nore	22	6	25	22	7	25	22	15	45	22	16	35	Norwegian.	Anglo-Saxon Pet. Co.	400	5	59	5	21	3	Ballast.	8,207	5,572	5,572
Kansan	22	7	30	22	9	00	22	16	36	22	17	35	American.	Amer.-Hawaiian Line.	404	6	54	0	18	0	General.	2,304	6,779	4,921
Heranpool	22	7	30	22	9	00	22	16	36	22	17	35	American.	Amer.-Hawaiian Line.	404	6	54	0	18	0	General.	2,304	6,779	4,921
Skoteas	22	6	45	22	11	10	22	18	15	22	19	20	Norwegian.	Anglo-Saxon Pet. Co.	449	0	59	2	22	9	Ballast.	2,304	6,779	4,921
Skoteas	22	6	45	22	11	10	22	18	15	22	19	20	Norwegian.	Anglo-Saxon Pet. Co.	449	0	59	2	22	9	Ballast.	2,304	6,779	4,921

* Motor ship. † Tug. ‡ Submarine. § Phosphates and cotton. ¶ Kerosene, lubricating oil, and gasoline.

* Tanker.

San Marcos	22	6.30	22	15.25	22	22.38	23	00.02	American	Quaker Line	410.0	54.0	21.6	New York, N. Y.	Seattle, Wash.	3,907	6,755	4,895
San Jose	20	18.35	23	10.20	23	17.32	23	18.45	American	United Fruit Co.	330.0	45.0	17.10	Cristobal, C. Z.	San Francisco, Cal.	370	3,675	2,359
Unity 1	23	7.05	24	6.05	24	14.25	24	16.45	Italian	A. Scott	518.0	64.0	26.8	Grosio, Italy	Balboa, C. Z.	3	3	3
Colombo	23	8.05	24	6.25	24	14.37	24	16.15	American	Nav. Generale Italiana	550.3	72.2	23.10	Baltimore, Md.	Valparaiso, Chile	1,724	12,553	7,516
Marore	23	6.30	24	7.15	24	14.54	24	16.45	Danish	Ore S. S. Corp.	425.3	55.2	14.6	Copenhagen, Den.	Crus Grande, Chile	15,551	4,297	7,516
Feru 2	23	6.30	24	8.15	24	14.59	25	16.45	British	East Asiatic Co.	365.0	57.0	25.0	Halifax, N. S.	Los Angeles, Calif.	7,407	5,660	7,096
Prance Robert	24	6.30	24	8.25	24	16.05	24	22.08	British	Can. Nat. Steamships	531.0	70.2	15.2	London, England	Vancouver, B. C.	2,820	18,197	13,526
Raughti 2	24	00.45	24	8.35	24	16.38	24	17.35	Norwegian	N. S. Shipping Co.	375.0	52.3	12.5	Rotterdam, Holland	Wellington, N. Z.	5,977	4,375	4,665
Hardanger	24	2.55	24	9.35	24	17.16	24	18.20	British	Intercean S. Corp.	411.7	54.6	15.0	Baltimore, Md.	Los Angeles, Calif.	9,033	5,938	5,938
Indian City	24	4.30	24	9.35	24	17.50	24	18.47	American	Standard Oil Co.	440.0	58.2	12.0	Pall River, Mass.	Los Angeles, Calif.	11,706	8,320	8,320
K. R. Kingsbury 1	24	6.15	24	10.50	24	18.17	25	3.25	British	Shaw, Savill & Albion	482.0	64.2	19.6	London, England	Los Angeles, Calif.	6,266	5,868	4,324
Taranaki 2	24	9.45	24	10.55	24	18.50	24	19.55	Japanese	Kokusa Kisen Kaisha	400.0	53.0	24.6	New York, N. Y.	Kobe, Japan	2,868	8,510	3,857
Clyde Maru	24	6.10	24	12.30	24	19.18	24	20.40	German	Hamburg-American Line	423.0	59.0	20.10	Hamburg, Germany	Vancouver, B. C.	2,868	8,510	3,857
Oakland 2	16	19.40	24	13.05	24	21.08	24	22.30	German	Hamburg-American Line	336.5	54.0	13.0	Cristobal, C. Z.	Guayquil, Ecuador	1,633	1,041	1,041
Durazzo	24	6.30	24	14.17	24	21.36	24	23.06	British	T. & J. Harison	396.5	52.6	22.3	Liverpool, England	Vancouver, B. C.	1,676	10,440	7,427
Colonial	24	3.00	24	14.50	24	21.55	24	23.06	French	French Line	470.0	66.0	22.3	Havre, France	Vancouver, B. C.	1,787	3,350	2,292
Wyoming	24	6.20	24	14.20	24	21.25	24	23.06	German	Hamburg-American Line	309.0	43.0	18.8	Hamburg, Germany	Champerico, Guat.	222	211	124
Syra	23	18.55	24	19.40	25	9.12	25	17.20	German	National Navigation Co	116.0	21.1	9.5	Perme, R. P.	Buenaventura, Col.	5,174	3,528	3,528
Caldas 2	23	3.00	25	5.55	25	14.00	25	17.20	American	Tidevater Oil Co.	424.0	58.0	21.0	New York, N. Y.	Los Angeles, Calif.	5,913	4,377	4,377
Robert E.	24	18.00	25	6.15	25	13.29	25	15.15	American	Munson Smith Line	383.0	53.5	13.0	Glasgow, Scotland	Vancouver, B. C.	4,076	6,623	4,668
Hopkins 1	24	21.40	25	7.10	25	14.48	25	16.10	British	Ransom S. S. Line	409.8	54.2	17.0	Baltimore, Md.	Tacoma, Wash.	2,328	6,821	4,927
Madras City	24	23.40	25	7.20	25	15.12	25	16.20	American	States S. S. Co.	409.8	54.2	17.0	Baltimore, Md.	Seattle, Wash.	5,174	3,528	3,528
Munnyside	25	2.30	25	7.20	25	15.12	25	16.20	American	James B. Berry Sons	364.9	51.0	21.0	New York, N. Y.	Los Angeles, Calif.	10,579	7,949	4,900
J. W. Van	25	6.20	25	8.30	25	16.07	25	17.20	American	Templeton Crocker	451.0	57.2	28.5	Baltimore, Md.	Seattle, Wash.	6,947	6,538	4,769
Dyke 2	25	4.15	25	9.30	25	17.23	25	19.25	Japanese	Osaka Shosen Kaisha	457.0	51.0	25.9	New York, N. Y.	Osaka, Japan	2,960	6,265	4,069
Zaca 2	25	6.10	25	8.35	25	17.07	25	18.09	American	Grace Line	370.0	53.0	22.0	San Francisco, Calif.	Valparaiso, Chile	60	114	85
Cubore 2	25	4.25	25	9.55	25	17.23	25	1.07	American	Yarmouth Shipping Co.	379.5	20.6	8.0	St. George's, Berda	Eisenstadt, Mexico	1,049	6,295	4,063
Havana Maru	24	14.15	25	10.10	25	18.10	25	19.25	British	Avenue Shipping Co.	375.2	33.5	16.0	New York, N. Y.	Sydney, Australia	1,242	9,641	6,989
Santa Rita 2	24	6.40	25	10.10	25	18.10	25	19.25	British	Furness, Withy & Co.	436.0	60.0	19.4	Glasgow, Scotland	Vancouver, B. C.	1,592	5,858	4,108
Andrey B.	24	8.45	25	10.40	25	18.35	26	6.02	British	Can. Nat. Steamships	400.0	52.0	18.0	St. John, N. B.	Vancouver, B. C.	4,263	6,099	4,455
Winton 2	25	8.45	25	10.40	25	18.35	26	6.02	British	Tatsuma K. K. Kaisha	400.0	52.0	22.0	Pampa, Florida	Kobe, Japan	5,855	5,659	4,138
Pacific Enterprize 2	24	12.15	25	12.15	25	19.44	25	20.45	British	Nelson Line	380.4	53.1	25.0	Seattle, Wash.	New York, N. Y.	6,900	6,573	4,916
Canadian	25	15.05	25	15.10	25	22.10	25	23.27	British	States S. S. Co.	410.0	54.3	25.0	Portland, Ore.	Philadelphia, Pa.	9,084	6,040	5,025
Planter	25	18.30	25	18.45	26	9.53	26	11.28	Japanese	Tidevater Oil Co.	419.5	56.5	27.0	San Francisco, Cal.	Wilmington, Del.	10,983	8,820	6,750
Miyadono Maru	25	18.30	25	18.45	26	9.53	26	11.28	Japanese	Standard Oil Co., N. Y.	480.3	66.0	23.0	Los Angeles, Calif.	New York, N. Y.	10,983	8,820	6,750
1	17	9.30	19	6.15	19	14.00	19	14.00	American	National Nav. Co.	107.0	92.9	9.0	Buenaventura, Col.	Cristobal, C. Z.	6,048	962	81
Charles Nelson	19	6.38	19	8.21	19	16.00	19	18.30	American	Eagle Oil & Ship. Co.	407.2	52.4	26.0	Wilmington, Calif.	United Kingdom	6,077	6,156	4,212
San Simeon	19	10.25	19	11.05	19	18.35	19	18.35	American	Fred Olsen & Co.	425.5	55.3	27.0	Vancouver, B. C.	Antwerp, Belgium	8,069	7,553	5,673
Solana 1	19	13.55	19	14.48	19	22.35	19	22.35	American	Wheat, lumber, and general								
Comet 1	19	16.10	19	16.48	19	23.28	21	16.04	Colombian									
Cauca 1	19	17.50	20	6.20	20	14.15	20	14.15	Colombian									
San Quintino	19	17.50	20	6.20	20	14.15	20	14.15	Norwegian									
George Washington 1	20	5.30	20	7.16	20	16.05	21	20.49	Norwegian									

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

1 Motor schooner.

2 Yacht.

3 Launch.

4 Tanker.

5 Motor ship.

6 Gasoline and lubricating oil.

Charles Nelson	17	9.30	19	6.15	19	14.00	19	14.00	American	Nelson Line	380.4	53.1	25.0	Seattle, Wash.	New York, N. Y.	5,855	5,659	4,138
San Simeon	19	6.38	19	8.21	19	16.00	19	18.30	American	States S. S. Co.	410.0	54.3	25.0	Portland, Ore.	Philadelphia, Pa.	6,900	6,573	4,916
Solana 1	19	10.25	19	11.05	19	18.35	19	18.35	American	Tidevater Oil Co.	419.5	56.5	27.0	San Francisco, Cal.	Wilmington, Del.	9,084	6,040	5,025
Comet 1	19	13.55	19	14.48	19	22.35	19	22.35	American	Standard Oil Co., N. Y.	480.3	66.0	23.0	Los Angeles, Calif.	New York, N. Y.	10,983	8,820	6,750
Cauca 1	19	16.10	19	16.48	19	23.28	21	16.04	Colombian	National Nav. Co.	107.0	92.9	9.0	Buenaventura, Col.	Cristobal, C. Z.	6,048	962	81
San Quintino	19	17.50	20	6.20	20	14.15	20	14.15	Colombian	Eagle Oil & Ship. Co.	407.2	52.4	26.0	Wilmington, Calif.	United Kingdom	6,077	6,156	4,212
George Washington 1	20	5.30	20	7.16	20	16.05	21	20.49	Norwegian	Fred Olsen & Co.	425.5	55.3	27.0	Vancouver, B. C.	Antwerp, Belgium	8,069	7,553	5,673

1 Motor ship.

2 Gasoline and lubricating oil.

3 Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Net.	
Rolling Stone ¹³	19	16.40	20	7.20	20	16.00	20	16.00	Panamanian	Robert Wilcox.	48.0	11.6		Balboa, C. Z.	Cristobal, C. Z.	Ballast.	3,699	6,621	
San Jose.	19	16.40	20	11.29	20	18.35	20	18.35	American.	United Fruit Co.	330.0	44.6	21.0	San Francisco, Cal.	Cristobal, C. Z.	General.	5,580	10,570	
Los Angeles ¹⁴	20	11.00	20	11.48	20	19.30	20	23.05	German.	Hamburg-American Line	432.5	59.2	26.0	Vancouver, B. C.	Antwerp, Belgium	General.	7,700	8,454	
Commander ¹⁵	20	12.40	20	13.28	20	21.00	20	23.05	American.	U. S. Navy.	407.4	52.2	26.0	Balboa, C. Z.	Darien, C. Z.	Ballast.	8,001	6,046	
El Cervo ¹	20	2.09	21	6.14	21	14.05	21	14.05	British.	Anglo-Ecuac. Oilfields.	340.0	46.2	23.3	La Libertad, Ecuac.	Philadelphia, Pa.	Crude oil.	4,570	3,981	
Nosa Queen.	20	2.09	21	6.14	21	14.05	21	14.05	American.	N. O. & S. S. Co.	340.0	46.2	23.3	Valparaiso, Chile.	New Orleans, La.	Crude oil.	4,570	3,981	
Heinrich V.	21	5.00	21	6.51	21	15.25	21	15.25	Danzig.	W. Tankerschiff Rhederei.	520.0	70.0	30.0	Talara, Peru.	Stettin, Germany.	General.	15,248	12,535	
Riedemann ¹⁴	21	2.00	21	7.20	21	17.05	22	19.15	French.	French Line.	425.0	55.0	26.1	Talcahuano, Chile.	Havre, France.	General.	8,585	6,990	
Alaska.	21	2.30	21	7.34	21	17.40	21	17.40	American.	Munson, McCork & Line	370.0	53.1	25.0	Seattle, Wash.	Baltimore, Md.	Lumber, general.	6,574	5,525	
Munited.	21	3.00	21	8.02	21	18.25	21	18.25	American.	Amer.-Hawaiian Line.	434.3	57.7	23.0	Portland Oreg.	Boston, Mass.	General.	6,838	7,983	
Arizona.	21	3.00	21	8.02	21	18.25	21	18.25	American.	Amer.-Hawaiian Line.	434.3	57.7	23.0	Portland Oreg.	Boston, Mass.	General.	6,838	7,983	
Lillian Luck- embach.	21	7.55	21	8.45	21	18.55	21	18.55	Panamanian	Loekenschach Line.	448.9	60.2	29.0	Portland, Oreg.	Boston, Mass.	Lumber, general.	6,700	9,294	
Berta ¹⁴ .	21	10.33	21	10.33	21	18.45	21	18.45	Panamanian	Jose M. Sossa.	74.5	19.6	6.0	Balboa, C. Z.	Cristobal, C. Z.	Ballast.	98	49	
Canadian/Leader	21	11.00	21	11.46	21	19.40	21	19.40	British.	Can. Nat. Steamships	400.0	52.0	18.0	Melbourne, Aus'ia	Montreal, Canada.	General.	2,579	5,891	
Pacific	21	13.05	21	13.46	21	21.00	21	22.55	British.	Furness, Wisby & Co.	435.9	60.2	27.3	Vancouver, B. C.	Manchester, Eng.	General.	8,600	9,644	
Reliance ¹⁴ .	21	17.30	22	8.13	22	15.50	22	18.45	British.	Can. Nat. Steamships	400.0	52.4	15.0	Auckland, N. Z.	Montreal, Canada.	General.	1,350	6,192	
Highlander.	22	10.50	22	12.11	22	20.10	22	20.10	American.	Standard Oil Co., Calif.	513.5	68.2	30.0	Los Angeles, Calif.	London, England.	Gasoline.	15,365	11,719	
California	22	10.50	22	12.11	22	20.10	22	20.10	American.	Standard Oil Co., Calif.	513.5	68.2	30.0	Los Angeles, Calif.	London, England.	Gasoline.	15,365	11,719	
Standard ¹⁴ .	22	10.50	22	12.11	22	20.10	22	20.10	American.	Standard Oil Co., Calif.	513.5	68.2	30.0	Los Angeles, Calif.	London, England.	Gasoline.	15,365	11,719	
Canes ¹⁴ .	22	12.25	22	12.25	22	22.30	22	22.30	Colombian.	National Navigation Co.	107.0	22.9		Balboa, C. Z.	Cristobal, C. Z.	General.	70	262	
Narragan- sett ¹⁴ .	21	22.20	22	14.17	22	22.10	22	22.10	Colombian.	Anglo-American Oil Co.	425.0	57.0	27.5	Los Angeles, Calif.	Glasgow, Scotland	Gasoline.	9,112	7,020	
Guatemala.	22	8.00	23	6.25	23	13.27	24	9.00	American.	Panama Mail S. S. Co.	360.0	51.6	21.5	San Francisco, Cal.	New York, N. Y.	General.	2,619	5,776	
Utowana ¹⁴ .	22	8.00	23	6.57	23	15.10	23	15.10	American.	A. V. Armour	230.0	33.6	11.2	Mazatlan, Mexico.	Cristobal, C. Z.	Ballast.	1,504	966	
Acajuta.	22	19.40	23	6.50	23	14.45	23	14.45	British.	Pacific Steam Nav. Co.	215.7	33.6	13.0	Champerico, Guat.	Cristobal, C. Z.	General.	265	1,273	
Tidewater ¹⁴ .	22	19.40	23	7.16	23	15.10	23	19.50	American.	Tidewater Oil Co.	480.6	66.0	29.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline.	13,270	9,734	
France Maru.	22	19.45	23	7.37	23	16.00	23	16.40	Japanese.	Warner Barnes & Co.	385.0	51.0	27.0	Iloilo, P. I.	East coast U. S. A.	Sugar.	7,800	6,209	
Constance	23	3.30	23	8.36	23	16.45	23	16.45	American.	Arrow Line.	409.6	54.2	26.0	Astoria, Wash.	New York, N. Y.	Lumber.	3,699	6,621	
Chandler.	23	3.30	23	8.36	23	16.45	23	16.45	American.	Arrow Line.	409.6	54.2	26.0	Astoria, Wash.	New York, N. Y.	Lumber.	3,699	6,621	
Tekoa.	23	7.10	23	9.09	23	18.00	23	18.00	British.	Swayze & Hoyt.	324.0	46.2	21.0	Seattle, Wash.	New Orleans, La.	Frozen, general.	5,580	10,570	
Point Bonita.	23	7.10	23	9.09	23	18.00	23	18.00	American.	Swayze & Hoyt.	324.0	46.2	21.0	Seattle, Wash.	New Orleans, La.	Frozen, general.	5,580	10,570	
Nordpol ¹⁴ .	23	8.05	23	9.30	23	18.40	23	18.40	Danish.	Anglo-Dutch-Nite Co.	330.8	53.9	26.0	Tucupilla, Chile.	Charleston, S. C.	Nitrates.	7,990	6,252	
Cal.	23	11.05	23	12.08	23	19.30	23	19.30	German.	Roland Line.	216.5	32.9	13.0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	647	1,105	
Prince Rupert	23	22.30	24	6.50	24	15.25	24	15.25	British.	Reardon Smith Line.	400.5	54.3	22.4	Vladivok, U. S. S. R.	Cobb, Ireland ¹⁶ .	Lumber.	5,450	6,977	
City	23	22.30	24	6.50	24	15.25	24	15.25	British.	Reardon Smith Line.	400.5	54.3	22.4	Vladivok, U. S. S. R.	Cobb, Ireland ¹⁶ .	Lumber.	5,450	6,977	
Chasine	24	2.30	24	7.17	24	17.55	24	18.50	Danish.	Isbrandtsen Moller Co.	378.0	50.2	26.0	Manila, P. I.	New York, N. Y.	Sugar, general.	7,090	5,520	
Maersk ¹⁴ .	24	2.30	24	7.17	24	17.55	24	18.50	Danish.	Isbrandtsen Moller Co.	378.0	50.2	26.0	Manila, P. I.	New York, N. Y.	Sugar, general.	7,090	5,520	

¹ Tanker.

¹³ Yacht.

¹⁴ Motor ship.

¹⁵ Launch.

¹⁶ For orders.

¹⁷ Nitrates, beans, and logs.

¹⁸ Gasoline and crude oil.

Queen Mand	24	4.30	24	7.47	24	19.20	24	19.20	British	400.2	52.3	26.0	Tocopilla, Chile	Baltimore, Md.	Nitrates	7.550	5.748	3.955
Ochoaventura	24	6.00	24	8.05	24	18.25	24	18.25	Amer-Hawaiian Line	407.7	53.7	24.4	Guaymas, Wash.	Boston, Mass.	General	5.788	7.103	4.991
Buenaventura	24	7.30	24	9.00	24	20.05	24	20.05	Panama R. R. S. Line	251.0	43.0	17.0	Swatayal, Ecuador	New York, N. Y.	Coffee, general	1.020	2.873	1.776
Unit	24	3.30	24	11.25	24	21.00	24	23.25	American	26.5	6.6	26.0	Davao, P. I.	Boston, Mass.	General	6.666	10.009	7.075
Tai Yang	24	19.15	25	6.15	25	14.15	25	16.50	Swedish	378.6	51.2	25.0	Corral, Chile	Oslo, Norway	Nitrates, general	6.915	5.448	3.967
Canadair	25	1.55	25	6.38	25	15.30	25	18.30	British	400.3	52.3	24.0	Vancouver, B. C.	Montreal, Canada	Lumber, general	6.112	5.892	4.186
Miller	25	5.00	25	6.56	25	15.15	25	15.40	British	375.0	52.6	16.0	Los Angeles, Calif.	New York, N. Y.	General	2.551	6.091	4.681
Silveredar	25	9.55	25	10.40	25	18.20	25	18.45	Norwegian	381.6	53.8	26.0	Vancouver, B. C.	Rotterdam, Holland	General	7.800	6.289	4.723
Hoyanger	25	9.55	25	10.40	25	18.20	25	18.45	Norwegian				Balboa, C. Z.	Cristobal, C. Z.	General			
Hull No. 22	25		25		25		25		American				Balboa, C. Z.	Cristobal, C. Z.	General			

¹⁹ Towing hull No. 22. ²⁰ Towed by launch Unity. All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian. PORT OF CRISTOBAL.

* ARRIVALS.										* DEPARTURES.									
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—												
April 19	Lizae D. Peabody ²¹	Martinez & May	Cartagena, Colombia.	April 19	No. 300-N ²²	Pan American-Grace Airways	Panama via wayports.												
April 19	Irona	United Fruit Co	Port Limon, Costa Rica.	April 19	No. 9688 ²²	Pan American Airways	San Salvador and waypt. Is.												
April 20	Zacapa	United Fruit Co	Cartagena, Colombia.	April 19	No. 670-M ²³	Pan American Airways	Miami via wayports.												
April 20	Simon Bolivar	Royal Netherlands S. S. Co.	Amsterdam via wayports.	April 19	Orinoco	United Fruit Co	New Orleans, La.												
April 20	Darien C-35 ²³	Seadfa Netherlands S. S. Co.	Barranquilla and waypt. Is.	April 19	Chilean Airplane N.O.I	Hamburg-American Line	Hamburg via wayports.												
April 20	Anacuena ²³	A. Tagaropoulos	Colon, Rep. of Panama.	April 20	Magallanes	Spanish S. S. Line	Talara via wayports.												
April 20	Inapaquina ²³	A. Tagaropoulos	Lake Charles via waypt. Is.	April 20	Inapaquina ²³	A. Tagaropoulos	Barcelona via wayports.												
April 21	Stella Lykes	Lykes Brothers S. S. Co.	Panama via wayports.	April 20	Zacapa	United Fruit Co	Colon, Rep. of Panama.												
April 21	No. 300-N ²²	Pan American-Grace Airways	Panama via wayports.	April 21	Pastores	United Fruit Co	Colon, Rep. of Panama.												
April 22	Ancon	Panama R. R. S. Line	New York via Kingstons.	April 22	No. 9664 ²²	Pan American Airways	New York via wayports.												
April 22	No. 669-M ²²	Pan American Airways	Miami via wayports.	April 22	No. 668-M ²²	Pan American Airways	San Salvador via waypt. Is.												
April 22	No. 9688 ²²	Pan American Airways	San Salvador and waypt. Is.	April 22	Simon Bolivar	Royal Netherlands S. S. Co.	Miami via wayports.												
April 23	Camden	United Fruit Co	Curacao, D. W. I.	April 22	Stella Lykes	Lykes Brothers S. S. Co.	Port Limon, Costa Rica.												
April 23	Tela	United Fruit Co	New Orleans and waypt. Is.	April 23	No. 145-M ²²	Pan American Airways	Sta. Domingo via wayports.												
April 23	Amapala	Colombian S. S. Line	Cartagena, Colombia.	April 23	Pastores	United Fruit Co	Curacao via wayports.												
April 24	Carare	Standard Fruit & S. S. Co.	New Orleans and Habana.	April 23	Tela	United Fruit Co	Colombian ports.												
April 24	Simon Bolivar	Royal Netherlands S. S. Co.	New York via wayports.	April 23	No. 144-M ²²	Pan American-Grace Airways	Port Limon via Bocas.												
April 24	Swiftsure	Shell Oil Co.	Arromouth via wayports.	April 23	Camden	United Fruit Co	Panama and wayports.												
April 25	No. 9664 ²²	Pan American Airways	Port Limon, Costa Rica.	April 24	Toloca	Colombian S. S. Line	Curacao, D. W. I.												
April 25	Swiftsure	Shell Oil Co.	Miami via wayports.	April 24	Darien C-35 ²³	Seadfa Airplane Co.	New York via Kingstons.												
April 25	No. 144-M ²²	Pan American-Grace Airways	Fall River via Curacao.	April 24	Annetta I. ²³	Standard Fruit & S. S. Co.	New York via wayports.												
April 25	Amnetta I. ²³	P. W. Hamilton	San Salvador and waypt. Is.	April 25	Carmelita ²¹	Standard Fruit & S. S. Co.	Barranquilla and waypt. Is.												
April 25	Anacuena ²¹	A. Tagaropoulos	Panama via wayports.	April 25	Berta ²³	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.												
April 25	Inapaquina ²¹	A. Tagaropoulos	Colon, Rep. of Panama.	April 25	Anacuena ²³	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.												
April 25	Berta ²³	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	April 25	Lizzie D. Peabody ²¹	Royal Netherlands S. S. Co.	Colon, Rep. of Panama.												
April 25			Colon, Rep. of Panama.	April 25	Carare	Martinez & May	Amsterdam via wayports.												
April 25			Colon, Rep. of Panama.	April 25	Anapala	Standard Fruit & S. S. Co.	San Andrea, Colombia.												
April 25			Colon, Rep. of Panama.	April 25			Arromouth via wayports.												
April 25			Colon, Rep. of Panama.	April 25			New Orleans and waypt. Is.												

PORT OF BALBOA.									
Date.	Vessel.	Line.	From—						
April 23	Supreme ²⁴	Van Campo Seaford Co.	Panama Bay, R. P.						
April 23	Reginohie ²⁴	Imperial Oil Co., Ltd.	Los Angeles, Calif.						
April 24	Reginohie ²⁴	Imperial Oil Co., Ltd.	Los Angeles, Calif.						
April 25	Supreme ²⁴	Van Campo Seaford Co.	Panama Bay, R. P.						
April 25	Reginohie ²⁴	Imperial Oil Co., Ltd.	Los Angeles, Calif.						

²¹ Motor schooner. ²² Air mail carrier. ²³ Motor boat. ²⁴ Other than ships passing through the Canal.

¹ Tanker. ² Motor ship.

"Prince Robert" Transits Canal.

The new twin-screw steamer *Prince Robert*, of the Canadian National Steamships, transited the Canal on April 24, 1931, en route from Halifax to Vancouver, British Columbia, with 49 passengers. She docked at Balboa upon completing transit and sailed the following day for Vancouver, via intermediate ports. The *Prince Robert* is the third and last of three sister ships built especially for a ferry service connecting Victoria, Vancouver, and Seattle, and also for the Alaskan service, the *Prince Henry* and the *Prince David*, completed last year, made the transit of the Canal on June 10 and July 23, 1930, respectively. The ships are capable of a speed of 23 knots, and each is 366 feet long by 57 feet beam, with measurement of 6,692 gross tons. They were built in Great Britain.

The *Prince Robert* was delivered to her owners at Halifax in February. The ship made three winter cruises from Boston to Bermuda, Kingston, Habana, and return, and also a special cruise from Halifax to Buenos Aires and return to carry the Canadian trade delegation attending the British Empire trade exposition held in Buenos Aires.

Cargo Declarations.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 24, 1931.

To all concerned:

1. In view of difficulties experienced in securing satisfactory statements from vessels with regard to the nature and quantity of their cargo at time of transit through the Panama Canal, the instructions covering the filling out the Cargo Declaration have been revised in the interests of clarity and simplicity. The body of the Declaration remains essentially the same; the revised instructions are as follows:

Instructions.—A declaration on this form, of cargo carried through the Panama Canal, is required from each vessel making transit. The declarations are the basis of important statistics which are published for the benefit of shippers and ships' operators generally but no information is disclosed concerning shipments by individual ships or lines.

Accurate information is desired concerning cargo that is important by reason of its tonnage or value, but it is not expected that small and unimportant items of cargo will be listed separately. Fractional parts of tons need not be shown.

Origin and destination may be indicated by either country or port, whichever is the more convenient; however, shipments to or from the Atlantic coast of the United States should be shown as North Atlantic, South Atlantic, or Gulf. (North Atlantic includes Hampton Roads and ports north; South Atlantic ports, south of Hampton Roads and north of the southern extremity of Florida.)

General cargo.—For ships carrying "general cargo" it is desired that the principal items of cargo be listed, as far as is practicable and reasonable. If cargo has been laden at more than one country, the tons from each country (or port, if more convenient) should be shown. Similarly, if to be discharged in more than one country, the tons for each country (or for each port) should be shown.

2. Cargo Declaration forms No. 4363 will hereafter bear the revised instructions.

H. BURGESS,
Governor.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending April 25, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Orinoco.....	Hamburg-American Line.....		April 19.....		1,611
Iriona.....	United Fruit Co.....	April 19.....	April 19.....	77	84
Ecuador.....	Panama Mail S. S. Co.....	April 19.....	April 20.....	199	631
Cauca.....	National Navigation Co.....	April 19.....	April 21.....	187	83
Lizzie D. Peabody.....	Martinez & May.....	April 19.....	April 25.....	(¹)	3
Magallanes.....	Spanish S. S. Line.....		April 20.....		313
Adolf von Baeyer.....	Hamburg-American Line.....	April 20.....	April 20.....	49	84
Los Angeles.....	Hamburg-American Line.....	April 20.....	April 20.....	5	80
Kinderdijk.....	Holland-America Line.....	April 20.....	April 21.....	218	53
George Washington.....	Fred Olsen & Co.....	April 20.....	April 21.....	(¹)	341
Guayaquil.....	Panama Railroad S. S. Line.....	April 20.....	April 21.....	820	98
Zacap.....	United Fruit Co.....	April 20.....	April 21.....	73	596
Simon Bolivar.....	Royal Netherlands S. S. Co.....	April 20.....	April 22.....	69	3
San Jose.....	United Fruit Co.....	April 20.....	April 23.....	1,499	297
Stella Lykes.....	Lykes Brothers.....	April 21.....	April 22.....	686	20
Alaska.....	French Line.....	April 21.....	April 22.....	918	(²)
Canadian Highlander.....	Canadian National Steamships.....	April 22.....	April 22.....	31	(²)
Ancon.....	Panama Railroad S. S. Line.....	April 22.....		1,788	
San Marcos.....	Quaker S. S. Line.....	April 22.....	April 22.....	218	(²)
Pastores.....	United Fruit Co.....	April 22.....	April 23.....	431	343
Cauca.....	National Navigation Co.....	April 22.....		83	
Tela.....	United Fruit Co.....	April 23.....	April 23.....	870	141
Acajutla.....	Pacific Steam Navigation Co.....	April 23.....		265	
Baracoa.....	Colombian S. S. Line.....	April 23.....	April 24.....	51½	247
Guatemala.....	Panama Mail S. S. Co.....	April 23.....	April 24.....	916	23
Camden.....	United Fruit Co.....	April 23.....	April 24.....	9,503	(²)
Colombo.....	Italian S. S. Line.....	April 23.....	April 24.....	188	62
Syra.....	Hamburg-American Line.....	April 23.....	April 24.....	210	400
Cali.....	Roland Line.....	April 23.....		647	
Caldas.....	National Navigation Co.....	April 23.....	April 25.....	159	209
Tolosa.....	United Fruit Co.....	April 24.....	April 24.....	253	44
Durazzo.....	Hamburg-American Line.....		April 24.....		189
Tai Yang.....	Barber-Wilhelmsen Line.....	April 24.....	April 24.....	58	(²)
Oakland.....	Hamburg-American Line.....	April 24.....	April 24.....	30	10
Colonial.....	T. & J. Harrison.....	April 24.....	April 24.....	222	(²)
Wyoming.....	French Line.....	April 24.....	April 24.....	107	192
Buenaventura.....	Panama Railroad S. S. Line.....	April 24.....	April 25.....	86	(²)
Santa Rita.....	Grace Line.....	April 24.....	April 25.....	127	797
Simon Bolivar.....	Royal Netherlands S. S. Co.....	April 24.....	April 25.....	16	1,093
Amapala.....	Standard Fruit & S. S. Co.....	April 24.....	April 25.....	290	644
Carare.....	Elders & Fyffes, Ltd.....	April 24.....	April 25.....	1	(²)
Pacific Enterprise.....	Furness, Withy & Co.....	April 24.....	April 25.....	(¹)	256
Anachucuna.....	A. Tagaropolos.....	April 24.....	April 25.....	42	(²)
Switsure.....	C. D. Mallory & Co.....	April 25.....		11,300	
Reina del Pacifico.....	Pacific Steam Navigation Co.....	April 25.....		107	

¹ No cargo discharged. ² No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending April 25, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Charles Nelson.....	Nelson Line.....	April 17.....	April 19.....	644	
Santa Elisa.....	Grace Line.....	April 17.....	April 17.....	10	4
Santa Maria.....	Grace Line.....	April 16.....	April 17.....	317	
San Jose.....	United Fruit Co.....	April 19.....	April 20.....	247	27
Ecuador.....	Panama Mail S. S. Co.....	April 20.....	April 21.....	14	2
Nosa Queen.....	N. O. & S. A. S. S. Co.....	April 20.....	April 21.....		201
Canadian Highlander.....	Canadian National Steamships.....	April 21.....	April 22.....	16	
Dorothy Cahill.....	Arrow Line.....	April 21.....	April 22.....	2,613	
Guatemala.....	Panama Mail S. S. Co.....	April 22.....	April 23.....	76	
Reginote.....	Imperial Oil Co., Ltd.....	April 23.....	April 24.....	12,064	

Information from American Consuls.

The Consular officers of the United States all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference. If it is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective April 27, 1931.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.24
Bronze, Tobin, average.....	Lb.	.28
Gasoline, motor grade.....	Gal.	.15
Metal, yellow.....	Lb.	.23
Oakum, Navy, spun.....	Lb.	.23
Oakum, Navy, unspun.....	Lb.	.13
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.33
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.45
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.39
Oil, kerosene, in drums.....	Gal.	.08
Oil, marine engine.....	Gal.	.49
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.11
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.11
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.13
Waste, cotton, white.....	Lb.	.16

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1931 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	From New York to Cristobal.			From Cristobal to New York.		
	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
Cristobal	April 28.....	May 3.....	May 6.....	May 10.....	May 13.....	May 18.....
Ancon	May 12.....	May 17.....	May 20.....	May 24.....	May 27.....	June 1.....
Cristobal	May 26.....	May 31.....	June 3.....	June 7.....	June 10.....	June 15.....
Ancon	June 9.....	June 14.....	June 17.....	June 21.....	June 24.....	June 29.....
Cristobal	June 23.....	June 28.....	July 1.....	July 5.....	July 8.....	July 13.....
Ancon	July 7.....	July 13.....	July 16.....	July 19.....	July 22.....	July 27.....
Cristobal	July 21.....	July 26.....	July 29.....	August 2.....	August 5.....	August 10.....
Ancon	August 4.....	August 9.....	August 12.....	August 16.....	August 19.....	August 24.....
Cristobal	August 18.....	August 23.....	August 26.....	August 31.....	September 3.....	September 8.....
Ancon	September 1.....	September 6.....	September 9.....	September 13.....	September 16.....	September 21.....
Cristobal	September 15.....	September 20.....	September 23.....	September 27.....	September 30.....	October 5.....
Ancon	September 29.....	October 4.....	October 7.....	October 11.....	October 14.....	October 19.....
Cristobal	October 14.....	October 19.....	October 22.....	October 25.....	October 28.....	November 2.....
Ancon	October 27.....	November 1.....	November 4.....	November 8.....	November 11.....	November 16.....
Cristobal	November 10.....	November 15.....	November 18.....	November 22.....	November 25.....	November 30.....
Ancon	November 24.....	November 29.....	December 2.....	December 6.....	December 9.....	December 14.....
Cristobal	December 8.....	December 13.....	December 16.....	December 20.....	December 23.....	December 28.....
Ancon	December 22.....	December 27.....	December 30.....	January 3.....	January 6.....	January 11.....

* Effective April 28th, steamers sail daylight saving time.

† Due to discontinuance of the daylight saving time, departure of S. S. *Ancon*, September 29, will be at 4 p. m. standard time.

Steamers sail at 4 p. m. from Pier 65, North River, foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

Trips Through the Canal.

The following lines operating passenger vessels through the Canal carry local passengers from one terminal to the other: Chilean Line, Grace Line, Hamburg-American Line, Navigazione Generale Italiana, North German Lloyd, Pacific Steam Navigation Co., Panama Mail Steamship

Co. The Hamburg-American Line, North German Lloyd and Panama Mail charge \$6 for the trip, the others \$10 for first-class passage. The Chilean Line has also a rate of \$4 for intermediate class, and the Panama-Pacific Line a rate of \$6 for tourist class. The several services together afford about 4 transits of the Canal each way every week.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV.

Balboa Heights, C. Z., May 6, 1931.

No. 40.

Canal Traffic During April, 1931.

During the month of April, 1931, 453 commercial vessels and 17 small nonseagoing launches transited the Canal. Tolls on the commercial vessels aggregated \$2,014,349.13, and on the launches \$64.50, or a total tolls collection of \$2,014,413.63.

The daily average of commercial vessels was 15.10, and the average tolls collection was \$67,144.97, as compared with an average of 14.16 transits and \$63,368.85 in tolls for the previous month, and an average of 16.30 transits and \$74,425.43 in tolls for April, 1930. The average amount of tolls paid by each of the commercial transits was \$4,446.69, as compared with \$4,565.98 for the month of April, 1930.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 10 months of the current fiscal year, with the daily averages of transits and tolls, and the totals for the first 10 months of the fiscal years 1930 and 1929:

Month.	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July.....	488	\$2,180,511.82	15.74	\$70,339.09
August.....	465	2,080,230.42	15.00	67,104.21
September.....	458	2,057,103.58	15.26	68,570.12
October.....	517	2,288,982.08	16.68	73,838.13
November.....	479	2,098,357.36	15.96	69,945.25
December.....	495	2,192,583.85	15.97	70,728.51
January.....	476	2,108,140.42	15.35	68,004.53
February.....	431	1,915,902.78	15.39	68,425.10
March.....	439	1,964,434.22	14.16	63,368.85
April.....	453	2,014,349.13	15.10	67,144.97
Total, first 10 months of fiscal year, 1931.....	4,701	20,900,595.66	15.46	68,751.96
Total, first 10 months of fiscal year, 1930.....	5,228	22,812,996.88	17.20	75,042.75
Total, first 10 months of fiscal year, 1929.....	5,386	22,703,024.37	17.72	74,681.00

In comparison with the first 10 months of the fiscal year 1930, the traffic in the corresponding period this year has had 527 fewer transits and \$1,912,401.22 less in tolls, decreases of 10.1 per cent and 8.4 per cent, respectively.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 2, 1931.

No. 876.

Ecuador, Gulf of Guayaquil, Puna Island, Salinas Point Shoals light buoy.—The following is quoted from Daily Memorandum No. 6911 of the Hydrographic Office at Washington, D. C., dated April 22, 1931:

The first officer of the American M. S. *Santa Rita*, of the Grace Line, reports that from observations Salinas Point Shoals light buoy was found to be located 9 miles 46" from Santa Clara Island lighthouse, in latitude 3° 04' 30" S., longitude 80° 19' W.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, May 2, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Oregonian.....	25	20	10	26	6	10	26	14	38	26	15	55	53.9	19.0	Boston, Mass.	San Francisco, Cal.	General.....	3,338	6,754	4,800
Cape Verde.....	25	20	25	26	6	15	26	15	40	26	17	00	53.5	22.6	St. Lucia, B. W. I.	Vancouver, B. C.	Sugar.....	6,000	5,756	4,118
Steel Mariner.....	26	1	00	26	7	10	26	15	40	26	17	00	405.2	26.0	New Orleans, La.	Shanghai, China.	General.....	7,888	7,611	5,450
Holystone.....	26	1	55	26	7	20	26	16	21	26	17	30	397.4	14.0	Tyne, England	Vancouver, B. C.	Ballast.....	.....	5,843	4,268
Reina del Pacifico ²	25	19	45	26	9	15	26	17	09	26	18	05	76.3	23.1	Liverpool, England	Talcahuano, Chile.	General.....	2,841	18,871	13,099
Port Fairy ²	26	6	05	26	8	45	26	17	29	26	22	00	63.0	28.2	Glasgow, Scotland	Nelson, N. Z.	General.....	2,983	10,673	7,757
Malayan.....	26	7	15	26	9	50	26	17	45	26	19	00	441.6	25.9	New York, N. Y.	Mamila, P. I.	General.....	6,238	9,209	6,245
Princes.....	26	17	00	26	18	25	27	9	35	27	10	43	385.0	25.0	New York	Yokohama, Japan.	Phosphate,cotton	6,917	6,209	4,763
Kofuku Maru.....	26	23	40	27	6	20	27	14	08	27	15	05	451.9	20.10	Cardiff, England.	Los Angeles, Calif.	Ballast.....	7,944	5,408	.....
Sandar ^{1,2}	27	1	25	27	7	05	27	15	11	27	16	20	391.8	19.6	New York, N. Y.	Los Angeles, Calif.	Ballast.....	5,550	3,920	.....
Kekosee.....	27	1	25	27	8	15	27	16	24	27	17	45	424.8	23.6	Baltimore, Md.	Seattle, Wash.	General.....	5,827	7,473	5,533
Robin Hood.....	27	8	00	27	9	20	27	16	41	27	17	55	409.6	16.6	North Shields, Eng.	Vancouver, B. C.	Ballast.....	.....	5,761	4,129
Riverdon.....	27	8	00	27	9	20	27	16	41	27	17	55	409.6	16.6	North Shields, Eng.	Vancouver, B. C.	Ballast.....	.....	5,761	4,129
Henry D.....	27	21	25	28	6	10	28	14	10	28	15	20	371.0	21.6	New York, N. Y.	Tacoma, Wash.	Sulphur.....	4,400	5,367	2,900
Whiton.....	28	6	00	28	6	45	28	14	56	28	16	00	351.3	14.0	Oslo, Norway	Los Angeles, Calif.	Ballast.....	.....	4,944	3,518
Brytle.....	28	6	50	28	7	30	28	15	27	28	16	30	401.6	24.3	Tampa, Fla.	Kobe, Japan.	General.....	7,100	6,656	4,954
Budamness.....	28	10	20	28	11	40	28	18	19	28	18	20	471.0	17.0	Boston, Mass.	Tacoma, Wash.	General.....	2,718	9,154	6,966
Texas.....	28	10	25	28	11	40	28	18	19	28	18	20	482.6	17.0	London, England.	Washington, N. Z.	General.....	.....	11,819	8,367
Zealandia ¹	28	10	25	28	11	40	28	18	19	28	18	20	482.6	17.0	Norfolk, Va.	Cruz Grande, Chile	Ballast.....	.....	14,538	4,480
Chilero.....	27	11	05	28	12	30	28	21	15	28	21	15	549.6	21.6	Cristobal, C. Z.	Gatun, C. Z.	Ballast.....	.....	14,538	4,480
Roy ³	27	11	05	28	12	30	28	21	15	28	21	15	549.6	21.6	Cristobal, C. Z.	Gatun, C. Z.	Ballast.....	.....	14,538	4,480
Gen. Morgan.....	28	6	30	28	11	35	28	13	50	28	15	20	370.0	14.0	Newcastle, England	Vancouver, B. C.	Ballast.....	3,200	6,667	4,949
Lewis ⁴	28	16	50	28	18	00	29	9	29	10	42	.....	28.0	.....	Cristobal, C. Z.	Pedro Miguel, C. Z.	Ballast.....	2,620	6,687	4,974
Pacific Oak.....	28	21	00	29	6	15	29	13	09	29	14	30	409.7	16.9	Philadelphia, Pa.	Seattle, Wash.	General.....	.....	6,945	5,011
Ithoos.....	28	21	00	29	6	15	29	13	09	29	14	30	409.7	16.9	New York, N. Y.	Los Angeles, Calif.	Ballast.....	.....	6,945	5,011
Helen.....	28	21	00	29	6	15	29	13	09	29	14	30	409.7	16.9	New York, N. Y.	Los Angeles, Calif.	Ballast.....	.....	6,945	5,011
Whittier.....	28	21	25	29	6	15	29	13	58	29	15	10	409.6	14.0	Baltimore, Md.	Los Angeles, Calif.	General.....	3,200	6,667	4,949
Langbleford.....	29	00	55	29	7	10	29	15	39	29	16	45	370.0	14.0	Newcastle, England	Vancouver, B. C.	Ballast.....	.....	3,193	3,515
Harry Luck.....	29	00	55	29	7	10	29	15	39	29	16	45	370.0	14.0	Newcastle, England	Vancouver, B. C.	Ballast.....	.....	3,193	3,515
enbach.....	29	2	45	29	7	20	29	15	01	29	16	15	448.9	22.5	Boston, Mass.	Seattle, Wash.	General.....	3,613	9,262	6,853
Acapulca.....	29	14	45	29	8	55	29	17	08	29	18	30	215.7	14.5	Cristobal, C. Z.	Champeroy, Guat.	General.....	543	1,273	706
Tofen ²	29	5	00	29	6	45	29	16	15	29	21	11	34.0	14.5	New York, N. Y.	Valparaiso, Chile.	General.....	3,387	7,393	5,459
Chilcoq.....	29	19	30	30	6	10	30	13	30	30	14	45	421.3	19.6	New York, N. Y.	Chamarral, Chile.	General.....	2,099	6,069	4,973
New Jersey.....	29	23	35	30	7	15	30	17	50	30	18	10	417.0	19.0	New York, N. Y.	San Luis Obispo, Cal.	Ballast.....	.....	6,925	4,982
Saramacca.....	27	19	25	30	7	40	30	14	23	30	15	10	336.0	42.0	Cristobal, C. Z.	San Francisco, Cal.	Ballast.....	.....	3,668	2,308
President Wilson.....	30	11	05	30	11	20	30	17	31	30	22	43	516.5	27.0	New York, N. Y.	Around the world.	General.....	3,340	15,286	10,533

¹ Tanker. ² Motor ship. ³ Launch. ⁴ River boat.

F. L. Luckenbach	30	19.50	30	20.15	1	13.30	American	Luckenbach Line	446.0	56.0	25.0	Los Angeles, Calif.	General	5,119	8,508	6,179
Santa Barbara	30	13.15	30	21.20	1	13.20	American	Grace Line	406.0	64.0	24.0	Talcahuano, Chile	General	2,808	10,687	6,633
Cauca	22	2.30	1	6.00	1	14.05	Colombian	National Navigation Co.	107.0	23.0	10.6	Buenaventura, Col.	General	1,923	262	161
Jason	30	7.30	1	11.00	1	17.30	Dutch	Royal Neth. S. Co.	347.0	48.0	19.3	Corral, Chile	General	1,023	4,321	3,120
Dio	1	5.45	1	6.15	1	15.58	American	Gulf Pae, Redwood Line	381.0	52.2	22.6	Los Angeles, Calif.	Coke, phosphate	5,400	5,708	4,131
Pennsylvania	1	5.35	1	7.25	1	15.06	American	Panama-Pacific Line	586.4	80.3	30.0	San Francisco, Cal.	General	3,555	25,262	18,194
Steel Age	1	8.05	1	8.20	1	16.27	American	Norton, Lilly & Co.	395.0	55.0	27.0	Honolulu, T. H.	Steel	8,084	7,330	5,245
Jefferson	1	4.05	1	10.25	1	17.26	American	Nav. S. S. Co.	440.0	56.0	19.3	Vancouver, B. C.	Autos, general	2,865	8,300	6,020
Meyers	30	19.00	1	11.32	1	17.52	Italian	Stav. Libera Tristina	464.2	57.4	16.3	Vancouver, B. C.	General	8,423	5,806	
Timavo	1	13.00	1	13.15	1	20.25	American	Standard Transp. Co.	363.0	62.7	19.0	Boston, Mass.	Ballast	9,744	7,140	
Dixie Arrow	30	18.00	1	14.18	1	21.51	German	Nord German Lloyd	400.0	51.0	17.7	Valparaiso, Chile	General	2,336	5,038	3,533
Erfurt	1	18.55	1	19.20	2	11.58	British	R. Chapman & Son	400.0	52.2	16.0	Vancouver, B. C.	Ballast	2,435	5,710	4,164
Clearton	1	18.55	1	19.20	2	11.58	British	R. Chapman & Son	400.0	52.2	16.0	Vancouver, B. C.	Ballast	2,435	5,710	4,164
Lauris	1	18.55	1	19.20	2	11.58	British	R. Chapman & Son	400.0	52.2	16.0	Vancouver, B. C.	Ballast	2,435	5,710	4,164
Swenson	1	11.50	2	6.12	2	12.48	Norwegian	Fred Olsen & Co.	435.0	56.0	19.3	Vancouver, B. C.	General	2,935	7,963	5,837
Eastern Sun	1	20.20	2	7.05	2	14.46	American	Sun Oil Co.	481.0	66.0	21.0	Los Angeles, Calif.	Ballast	9,607	6,548	
Argoworld	1	22.25	2	7.15	2	15.05	American	Richfield Oil Co.	429.0	59.2	19.0	Los Angeles, Calif.	Ballast	7,720	5,615	
Treloske	1	23.15	2	8.30	2	16.10	British	Hain S. S. Co.	400.2	52.1	13.6	Vancouver, B. C.	Ballast	5,707	4,319	
Calif	23	19.30	2	9.05	2	17.10	German	Roland S. S. Line	216.5	32.9	12.9	Cristobal, C. Z.	General	250	1,105	698
Washington	2	5.50	2	9.40	2	17.51	American	The Texas Co.	426.0	57.0	22.2	Los Angeles, Calif.	Ballast	7,484	5,216	
Acadron	2	13.55	2	14.10	2	22.48	British	Anglo-Saxon Pet. Co.	412.0	53.3	18.0	Montreal, Canada	Ballast	6,189	4,235	

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Lebore	26	1.30	26	5.55	26	15.35	American	Ore S. S. Corp.	549.6	72.2	35.0	Baltimore, Md.	Iron ore	21,800	14,325	4,635
Northern Sun	25	21.00	26	6.26	26	15.45	American	Sun Oil Co.	480.6	66.0	29.0	Chester, Pa.	Gasoline	13,591	9,761	6,649
Dorrestar	25	18.45	26	7.20	26	16.35	British	Blue Star Line	499.8	64.0	28.0	Newcastle, England	Frozen, general	8,601	11,673	8,143
Atlantic	25	22.05	26	8.10	26	17.00	Norwegian	Anglo-Saxon Pet. Co.	441.6	57.5	26.0	Curacao, D. W. I.	Gasoline	9,901	7,589	5,312
Almar	26	4.00	26	8.48	26	17.45	American	Calmar Line	399.7	56.2	27.0	Philadelphia, Pa.	Lumber	7,900	7,381	5,595
Kreta	26	12.15	26	13.03	26	19.50	German	Hamburg-American Line	309.3	44.8	14.5	Hamburg, Germany	Coffee, general	975	3,397	2,337
C. O. Stiel	26	19.20	27	6.16	27	15.15	British	International Pet. Co.	565.7	75.6	34.0	Halifax, N. S.	Crude oil	20,739	16,780	9,885
Steel Ranger	26	23.55	27	6.36	27	14.25	American	Isthmian S. Lines	424.2	56.2	27.0	Avonmouth, Eng.	General	7,536	7,611	5,450
Minnesota	27	1.15	27	7.02	27	16.29	American	Amer-Hawaiian Line	407.7	53.7	25.0	Boston, Mass.	General	5,367	7,150	5,024
Santa Clara	27	6.00	27	8.26	27	15.55	28	00	10	63.9	24.0	New York, N. Y.	Copper, general	5,209	11,680	7,442
Sacramento Valley	27	1.40	27	8.29	27	17.05	British	Reardon Smith Line	401.6	54.3	24.2	Cardiff, Wales	General	7,061	6,621	4,916
Empire Arrow	27	8.00	27	9.01	27	17.55	27	19	55	28	17	Los Angeles, Calif.	Gasoline	11,286	9,841	6,946
Kongberg	27	3.10	27	9.39	27	19.00	28	2	35	26	0	Bremen, Germany	General	2,666	7,253	5,012
Saratouca	26	13.00	27	12.19	27	19.25	30	7	40	19	0	Cristobal, C. Z.	Coffee, general	4,005	3,668	2,308
América	27	12.30	27	17.18	28	13.10	Danish	East Asiatic Co.	465.4	62.2	28.0	Copenhagen, Den.	General	9,563	11,060	8,076
California	27	12.10	28	6.08	28	14.10	28	14	55	28	0	New York, N. Y.	General	4,427	24,506	17,565
Callina	27	23.50	28	6.45	28	15.55	28	20	40	0	San Francisco, Cal.	General	8,511	7,790	6,010	
Suedast	28	00.05	28	7.28	28	16.50	28	16	50	25	0	Trieste, Italy	Wheat, general	7,200	6,079	4,534
Suedast	28	4.15	28	7.40	28	17.45	28	18	30	25	3	Hilo, P. I.	Sugar	8,330	6,085	4,289
Manana	28	6.15	28	8.18	28	18.15	28	19	40	26	0	Rotterdam, Holland	Wheat, general	8,823	7,027	5,341
Panama	28	8.00	28	8.52	28	18.25	28	21	40	26	0	Vancouver, B. C.	General	6,193	8,543	6,427
Edward Luckenbach	28	8.00	28	8.52	28	18.25	28	21	40	26	0	Portland, Ore.	General	6,193	8,543	6,427

⁶ Wheat, lumber, and general.

⁵ Motor ship.

¹ Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Character or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Duchessa	28	9 45	28	10 58	28	20 07	29	1 25	Italian.	Nav. Libera Triestina.	447.3	57.1	27.5	Vancouver, B. C.	Naples, Italy.	General.	7,295	8,734	6,144	
D'Ansta	7	28	11 50	28	12 23	28	20 00	28	20 00	American.	Isthmian S. S. Lines.	424.8	55.2	25.0	Seattle, Wash.	Baltimore, Md.	Lumber, general.	5,533	7,472	5,542
Robin Gray.	28	10 15	28	14 23	28	21 25	28	21 25	American.	Ford Motor Co.	250.5	43.6	21.0	Aberdeen, Wash.	New York, N. Y.	Lumber, auto pigs.	2,916	2,692	1,808	
Lake Gorin.	28	10 15	28	14 23	28	21 25	28	21 25	American.	Ford Motor Co.	250.5	43.6	21.0	Aberdeen, Wash.	New York, N. Y.	Lumber, auto pigs.	2,916	2,692	1,808	
Florence	28	14 30	28	15 24	28	22 40	28	22 40	American.	Luckenbach Line.	401.8	52.2	23.0	Portland, Oreg.	New Orleans, La.	General.	5,157	6,002	4,621	
Willboro.	29	00 40	29	6 46	29	14 05	29	14 05	American.	Amer.-Hawaiian Line.	415.0	56.0	28.0	Seattle, Wash.	Baltimore, Md.	Lumber, general.	8,575	7,717	5,763	
Hokuroku	29	00 40	29	6 46	29	14 05	29	14 05	American.	Amer.-Hawaiian Line.	415.0	56.0	28.0	Seattle, Wash.	Baltimore, Md.	Lumber, general.	8,575	7,717	5,763	
Maru 7.	29	4 00	29	7 28	29	15 15	29	20 10	Japanese.	Osaka Shosen Kaisha.	446.0	60.5	24.0	Shanghai, China.	Baltimore, Md.	General.	4,809	8,942	6,251	
Helio.	29	1 30	29	7 58	29	16 00	29	16 00	Norwegian.	Panama Mail S. S. Co.	214.2	34.3	12.0	Acapulca, Salvador.	Cristobal, C. Z.	General.	440	1,158	722	
Nepreaso.	29	8 45	29	9 30	29	17 40	30	1 25	British.	Royal Mail S. P. Co.	490.2	58.3	26.0	Vancouver, B. C.	Hamburg, Germany	General.	6,436	8,878	6,588	
Pacific Red-wood	29	13 40	29	14 40	29	22 55	29	22 55	American.	Dimon S. S. Corp.	409.6	54.2	26.0	Seattle, Wash.	Norfolk, Va.	Lumber, general.	7,618	6,597	4,845	
New York 7.	29	15 10	29	16 11	30	9 00	30	9 00	American.	The Texas Co.	416.8	56.1	27.0	Los Angeles, Calif.	Providence, R. I.	Gasoline.	8,507	6,775	4,841	
Takeoyo Maru	29	20 30	30	6 09	30	14 05	30	21 45	Japanese.	Nippon Yusen Kaisha.	445.0	58.0	27.0	Iloilo, P. I.	New York, N. Y.	General.	8,783	7,472	5,686	
Nordcap 7.	29	23 30	30	6 45	30	14 30	30	14 30	Danish.	Dupont de Nemours	384.7	54.4	25.0	Topeka, Chile	Norfolk, Va.	Nitrates.	7,890	6,515	4,756	
San Clemente.	30	2 20	30	7 47	30	15 15	30	15 15	American.	Quaker Line.	410.0	54.4	25.0	Portland, Oreg.	Philadelphia, Pa.	Lumber, general.	6,846	6,476	4,682	
Helder	30	3 00	30	8 01	30	16 05	30	22 35	Dutch.	Royal Nedh. S. S. Co.	361.4	49.8	23.2	Corral, Chile.	Hamburg, Germany	General.	5,226	5,117	3,807	
Orazo 7.	30	3 35	30	10 11	30	17 20	2	11 45	Italian.	Nav. Generale Italiana.	482.8	61.1	23.0	Talcahuano, Chile.	Genoa, Italy.	General.	1,604	12,977	9,373	
San Jose	30	13 00	30	13 32	30	20 10	1	17 15	French.	Irish Line.	431.1	57.2	25.0	Vancouver, B. C.	Havre, France	General.	5,590	7,767	4,507	
Sally Maerak 7.	30	15 30	30	16 37	1	11 20	1	12 40	Danish.	Brandenburg, Moller Co.	332.1	44.2	22.0	Manila, P. I.	Cape Harters	Sugar, lumber.	4,324	3,518	2,510	
Tainui	30	22 36	1	6 40	1	14 15	1	20 15	British.	Shaw, Savill & Albion.	477.8	61.1	25.0	Lyttleton, N. Z.	London, England	General.	7,622	10,277	7,304	
Tacoma	1	00 20	1	8 06	1	15 55	1	22 15	German.	Hamburg-American Line	477.5	67.6	27.0	Talcahuano, Chile	Hamburg, Germany	General.	6,716	12,417	8,305	
Orcoma	1	00 20	1	8 56	1	18 00	1	21 30	British.	Pacific Steam Nav. Co.	419.5	56.5	32.0	Manila, P. I.	Liverpool, England	General.	10,364	8,696	6,316	
Scottsburg	1	5 00	1	9 18	1	18 15	1	18 15	American.	Amer. Gulf Orient Line.	365.0	51.6	28.0	Everett, Wash.	Poughkeepsie, N. Y.	Lumber	9,644	5,349	2,950	
Herman Frasch	1	7 00	1	11 35	1	20 55	1	20 55	American.	A. C. Dutton Linn. Co.	440.1	56.0	28.0	Manila, P. I.	New Orleans, La.	General.	5,644	8,329	6,157	
Invincible	30	18 10	1	12 44	1	20 35	1	20 35	American.	Tampa Interocean Co.	440.1	56.0	28.0	Manila, P. I.	Philadelphia, Pa.	Lumber, general.	7,409	6,625	4,841	
Sea Thrush.	1	12 15	1	12 49	1	20 55	1	20 55	American.	Shepard S. S. Co.	116.0	21.1	10.3	Buenaventura, Col.	Cristobal, C. Z.	General.	192	211	124	
Caldas 7.	1	13 35	1	15 11	1	22 30	1	22 30	Colombian.	National Navigation Co.	116.0	21.1	10.3	Valparaiso, Chile.	New York, N. Y.	General.	3,839	6,255	4,076	
Santa Inez 7.	1	13 06	2	6 11	2	13 55	2	13 55	American.	Amer.-Hawaiian Line.	491.5	58.2	28.0	Seattle, Wash.	New York, N. Y.	Lumber, general.	8,469	10,491	7,601	
Virginian	1	20 00	2	6 45	2	13 12	2	13 12	American.	Amer.-Hawaiian Line.	491.5	58.2	28.0	Seattle, Wash.	New York, N. Y.	Lumber, general.	8,469	10,491	7,601	
Margaret	2	4 15	2	6 51	2	14 40	2	21 45	Sweden.	Johnson Line.	407.3	54.1	25.0	Vancouver, B. C.	Stockholm, Sweden.	General.	5,782	7,048	5,337	
Johnson 7.	2	4 00	2	14 19	2	22 45	2	22 45	German.	North German Lloyd.	749.4	83.1	31.0	New York, N. Y.	New York, N. Y.	Cotton.	125	83,999	20,079	
Columbus	2	8 15	2	15 25	2	22 35	3	11 25	American.	Roosevelt S. S. Co.	395.5	55.0	27.0	Mamabard, P. I.	New York, N. Y.	Sugar, general.	8,227	7,209	5,172	
Wichita 7.	2	8 15	2	15 25	2	22 35	3	11 25	American.	Roosevelt S. S. Co.	395.5	55.0	27.0	Mamabard, P. I.	New York, N. Y.	Sugar, general.	8,227	7,209	5,172	
Morgan Lewis	28	.....	28	.....	28	.....	28	.....	American.	U. S. Army	.....	.....	.....	Pedro Miguel, C. Z.	Cristobal, C. Z.	Ballast.	.....	.....	.....

7 Motor ship. 8 Tug. 9 For orders. 10 Around the world 11 Frozen, wool, and tallow. 12 Coconut oil and sugar.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL

* DEPARTURES.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
April 26	Schenck No. 159 ¹³ .	U. S. Navy.	High seas.	April 25	Inapaquina ¹⁵ .	A. Tagaropolos.	Colon, Rep. of Panama
April 26	Tela.	United Fruit Co.	Port Limon, Costa Rica.	April 26	No. 9688 ¹⁴ .	Pan American Airways.	San Salvador via wayp's.
April 26	No. 145-M ¹⁴ .	Pan American Airways.	La Guayra via wayp's.	April 26	No. 669-M ¹⁴ .	Pan American Airways.	Miami via wayports.
April 26	Nueva Espana ¹⁵ .	Diez & Garcia.	Colon, Rep. of Panama.	Tela.	United Fruit Co.	New Orleans, La.	New York via Haiti.
April 27	Flandre.	French Line.	St. Nazaire via wayports.	April 26	Ancon.	Panama R. R. & S. Line.	New Orleans, La.
April 27	Augusta ¹⁶ .	Gustamano, Cuba.	Gustamano, Cuba.	April 27	Swiftsure.	Shell Oil Co.	Curacao, D. W. I.
April 27	Darien C-35 ¹⁴ .	Seadta Airplane Co.	Barranquilla and wayp's.	April 27	Schenck No. 159 ¹³ .	U. S. Navy.	Bluefields, Nicaragua.
April 28	Pastores.	United Fruit Co.	Cartagena, Colombia.	April 29	No. 9664 ¹⁴ .	Pan American Airways.	San Salvador and wayp's.
April 28	No. 300-N ¹⁴ .	Pan American-Grace Airways.	Pimental via wayports.	April 29	No. 670-M ¹⁴ .	Pan American Airways.	Miami via wayports.
April 28	Inapaquina ¹⁵ .	A. Tagaropolos.	Colon, Rep. of Panama.	April 29	Pastores.	United Fruit Co.	New York via wayports.
April 28	Anchucuna ¹⁵ .	A. Tagaropolos.	Colon, Rep. of Panama.	April 29	Flandre.	French Line.	Havre via wayports.
April 29	Iriona.	United Fruit Co.	New Orleans, La.	April 29	Inapaquina ¹⁵ .	A. Tagaropolos.	Colon, Rep. of Panama.
April 29	Metapan.	United Fruit Co.	San Juan, Puerto Rico.	April 29	Iriona.	United Fruit Co.	Colon, Rep. of Panama.
April 30	Aceta ¹⁷ .	U. S. Government.	New York via wayports.	April 30	No. 145-M ¹⁴ .	Pan American Airways.	Port Limon via Bocas.
April 30	No. 689-M ¹⁴ .	Pan American Airways.	Miami via wayports.	April 30	No. 144-M ¹⁴ .	Pan American-Grace Airways.	Maracaibo via wayports.
April 30	No. 9688 ¹⁴ .	Pan American Airways.	San Salvador and wayp's.	April 30	Metapan.	United Fruit Co.	Talara via wayports.
May 1	Bogota.	Colombian S. Line.	San Salvador and wayp's.	May 1	No. 9688 ¹⁴ .	Pan American Airways.	Colombian ports.
May 1	Ufa.	United Fruit Co.	New York via wayports.	May 1	Darien C-35 ¹⁴ .	Seadta Airplane Co.	San Salvador and wayp's.
May 1	Cefalu.	Standard Fruit & S. S. Co.	New Orleans via wayports.	May 1	Bogota.	Colombian S. Line.	Barranquilla and wayp's.
May 1	Annetta I. ¹⁵ .	C. Connolly.	Colon, Rep. of Panama.	May 1	Ufa.	U. S. Navy.	New York and Kingston.
May 1	Geo. W. Barnes.	Pan American Pet. & Trausp. Co.	Aruba, D. W. I.	May 1	Ufa.	U. S. Navy.	Mayaguez, P. R.
May 1	Grinewald.	Hamburg-American Line.	Colon, Rep. of Panama.	May 1	R. A. Glenn ¹⁸ .	C. Connolly.	Port Limon, Costa Rica.
May 2	Pollux.	Anglo-Saxon Petroleum Co.	Tampico via wayports.	May 1	Cefalu.	Standard Fruit & S. S. Co.	New Orleans, La.
May 2	No. 9664 ¹⁴ .	Pan American Airways.	Curacao, D. W. I.	May 2	Annetta I. ¹⁵ .	P. W. Hamilton.	Colon, Rep. of Panama.
May 2	No. 668-M ¹⁴ .	Pan American Airways.	San Salvador and wayp's.	May 2	Carmelita ¹⁹ .	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.
May 2	No. 144-M ¹⁴ .	Pan American-Grace Airways.	Miami via wayports.	May 2	Anchucuna ¹⁵ .	A. Tagaropolos.	Colon, Rep. of Panama.
May 2	No. 9688 ¹⁴ .	Pan American Airways.	Pimental via wayports.	May 2	Carmelita ¹⁹ .	Diez & Garcia.	Colon, Rep. of Panama.
May 2	No. 9688 ¹⁴ .	Pan American Airways.	Colon, Rep. of Panama.				

¹³ Destroyer. ¹⁴ Air mail carrier. ¹⁵ Motor boat. ¹⁶ Cruiser. ¹⁷ Lighthouse tender. ¹⁸ Yawl. ¹⁹ Motor schooner. ²⁰ Cruiser.

PORT OF BALBOA

April 27	Real ²¹ .	Hans Elliot.	Panama Bay, R. P.	April 28	Real ²¹ .	Hans Elliot.	Panama Bay, R. P.
April 30	Marit ²¹ .	Shell Oil Co.	Los Angeles, Calif.	May 2	Marit ²¹ .	Shell Oil Co.	Los Angeles, Calif.
May 1	Cathwood ²¹ .	Union Oil Co. of Calif.	Los Angeles, Calif.	May 2	Cathwood ²¹ .	Union Oil Co. of Calif.	Los Angeles, Calif.
May 1	Nueva Panama ²² .	Hans Elliot.	Panama Bay, R. P.	May 1	Nueva Espana ²³ .	Hans Elliot.	Panama Bay, R. P.
May 1	Hans Elliot.	Hans Elliot.	Panama Bay, R. P.	May 1	Sambu ²¹ .	Hans Elliot.	Panama Bay, R. P.
May 1	Hans Elliot.	Hans Elliot.	Panama Bay, R. P.	May 1	Real ²¹ .	Hans Elliot.	Panama Bay, R. P.
May 1	Hans Elliot.	Hans Elliot.	Panama Bay, R. P.	May 1	El Libertador ²¹ .	El Libertador ²¹ .	Panama Bay, R. P.
May 1	A. Valdez.	A. Valdez.	Panama Bay, R. P.	May 1	A. Valdez.	A. Valdez.	Panama Bay, R. P.
May 1	Dos Hermanos ²¹ .	Dos Hermanos ²¹ .	Panama Bay, R. P.	May 1	Dos Hermanos ²¹ .	Dos Hermanos ²¹ .	Panama Bay, R. P.

* Other than ships passing through the Canal.

²¹ Tanker. ²² Motor schooner. ²³ Motor ship.

The "Columbus" and Other Large Ships on Cruises around the World.

The German steamship *Columbus*, of the North German Lloyd, arrived at Balboa on the morning of May 2, 1931, with a party of 350 tourists on board. Transit of the Canal was made the same day, en route to New York, via Habana, where the vessel is due to arrive on May 8, 1931, completing a cruise around the world of 30,000 miles covering a period of almost 4 months. The *Columbus* made her first around-the-world cruise last year, transiting the Canal on May 3, 1930. She is the largest commercial ship to have transited the Canal in point of length, registered gross and net tonnage, and Panama Canal net tonnage.

The *Columbus*, which was the flagship of the North German Lloyd fleet before the advent of the *Europa* and *Bremen*, is 749 feet long and of 32,565 gross and 15,988 net tons, registry measurement, and 20,079 net tons, Panama Canal measurement. Tolls, limited to \$1.25 per ton on a net tonnage of 12,793 as determined under United States registry measurement, amounted to \$15,991.25. This was less than the tolls paid by the *Empress of Scotland*, the *America*, and the *Belgenland*, ships of less length and gross tonnage than the *Columbus*.

Two other vessels on especially conducted around-the-world cruises are due to transit the Canal this month, the *Resolute*, of the Hamburg-American Line, arriving on or about the 18th, and the *Franconia*, of the Cunard Line, arriving on or about the 21st. Both vessels left New York last January, sailing eastward via Suez. The *Belgenland*, of the Red Star Line, transited the Canal December 23, 1930, sailing westward on an around-the-world cruise.

Traffic by Nationality for April, 1931.

The following tabulation shows the commercial traffic through the Canal during the month of April, 1931, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for April, 1930 and 1929:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British	60	334,857	238,603	403,838	244,381	\$269,865.04	111,669
Chilean	3	13,194	9,219	16,237	9,458	11,523.75	5,471
Colombian	5	731	712	1,113	716	862.10	985
Danish	5	22,809	16,371	24,976	16,510	17,997.70	18,456
Danzig	1	8,224	7,068	12,175	6,974	5,921.28	.....
Dutch	5	23,561	16,367	27,012	16,557	20,458.75	9,215
French	3	17,494	11,401	20,589	11,894	14,251.25	4,650
German	13	47,237	30,721	52,246	31,057	38,401.25	22,531
Italian	2	17,372	13,441	24,954	14,083	16,801.25	2,377
Japanese	11	56,189	45,631	69,953	44,892	56,874.55	65,126
Norwegian	19	89,012	63,265	105,055	63,261	66,068.89	21,957
Panamanian	1	6,967	3,610	6,604	4,057	4,512.50	3,867
Swedish	5	25,523	16,514	36,982	20,642	19,200.87	15,310
United States	102	521,973	395,638	606,174	395,801	451,957.12	271,995
Total, April, 1931	235	1,185,143	868,561	1,451,908	880,283	994,696.30	553,609
Total, April, 1930	240	1,226,284	910,658	1,511,780	917,996	1,061,309.99	806,119
Total, April, 1929	259	1,190,510	907,312	1,479,562	911,498	1,046,690.90	862,450

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	1	4,103	3,247	5,942	3,607	\$4,058.75	6,920
British	50	296,881	216,459	365,326	222,956	267,756.35	323,960
Chilean	1	4,705	3,466	7,310	3,976	4,332.50	4,806
Colombian	4	570	550	880	550	626.23	577
Danish	11	55,039	39,822	64,338	40,564	49,777.50	89,324
Danzig	1	8,224	7,068	12,175	6,974	8,835.00	15,248
Dutch	5	22,111	14,364	24,150	14,685	17,955.00	28,292
French	5	28,899	18,552	34,414	19,083	23,190.00	39,321
German	12	36,022	24,607	41,942	24,579	30,758.75	41,333
Italian	4	30,856	19,374	38,320	22,942	24,217.50	18,630
Japanese	10	51,734	43,754	64,817	42,220	54,358.75	73,760
Norwegian	14	73,727	49,709	82,498	49,341	62,136.25	105,556
Panamanian	2	69	65	106	66	51.90	
Spanish	1					1,648.50	
Swedish	5	23,558	17,020	37,411	21,120	21,275.00	52,698
United States	92	471,164	359,905	582,811	358,647	448,674.85	657,083
Total, April, 1931	218	1,107,662	817,962	1,362,440	831,310	1,019,652.83	1,457,508
Total, April, 1930	249	1,252,812	939,146	1,563,708	954,028	1,171,453.01	1,650,663
Total, April, 1929	281	1,297,666	992,295	1,647,803	1,005,880	1,234,396.37	1,857,218

¹ Naval vessel of 3,297 displacement tons.

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	1	4,103	3,247	5,942	3,607	\$4,058.75	6,920
British	110	631,738	455,062	769,164	467,337	537,621.39	435,629
Chilean	4	17,899	12,685	23,547	13,434	15,856.25	10,277
Colombian	9	1,301	1,262	1,993	1,266	1,488.33	1,562
Danish	16	77,848	56,193	89,314	57,074	67,775.20	107,780
Danzig	2	16,448	14,136	24,350	13,948	14,756.28	15,248
Dutch	10	45,672	30,731	51,162	31,242	38,413.75	37,507
French	8	46,393	29,953	55,003	30,977	37,441.25	43,971
German	25	83,259	55,328	94,188	55,636	69,160.00	63,864
Italian	6	48,228	32,815	63,274	37,025	41,018.75	21,007
Japanese	21	107,923	89,385	134,770	87,112	111,233.30	138,886
Norwegian	33	162,739	112,974	187,533	112,602	128,205.14	127,513
Panamanian	3	7,036	3,675	6,710	4,123	5,464.40	3,867
Spanish	1					1,648.50	
Swedish	10	49,081	33,534	74,393	41,762	40,475.87	68,008
United States	194	993,137	755,543	1,232,985	754,448	900,631.97	929,078
Total, April, 1931	453	2,292,805	1,686,523	2,814,348	1,711,593	2,014,349.13	2,011,117
Total, April, 1930	489	2,479,096	1,849,804	3,075,488	1,872,024	2,232,763.00	2,456,782
Total, April, 1929	540	2,488,176	1,899,607	3,127,365	1,917,378	2,281,087.27	2,719,668

² Naval vessel of 3,297 displacement tons.

Forest Preserve.

In THE PANAMA CANAL RECORD for June 25, 1931, appeared an article, "Natural Timber Preserve Flanking Madden Road," wherein was described an area bordering the Madden Road from the north boundary of the Summit pasture to the boundary between the Canal Zone and Panama which had been set aside as a natural timber preserve by an order of the Governor issued June 14, 1930. In circular dated April 29, 1931, a detailed description of the land thus set aside is given in metes and bounds, and all circulars previously issued on the subject have been abrogated. The description refers to Drawing M-6101-73 and states:

Starting at a concrete monument (Marked "A") on the Canal Zone 5-mile boundary line, in latitude $9^{\circ} 07' + 4,221.0$ feet and longitude $79^{\circ} 37' + 1,327.6$ feet, said monument being N. $29^{\circ} 20'$ W. a distance of 144.17 feet from the intersection of the Canal Zone 5-mile boundary line and the center line of the Madden Road;

Thence S. 29° 07' 34" W. a distance of 19,035.4 feet to a pipe monument (marked "B" on the map) located in the Cattle Industry fence, in latitude 9° 04' +5,734.8 feet and longitude 79° 38' +4,582.3 feet;

Thence following the Cattle Industry fence in an easterly and southerly direction a distance of 9,518.8 feet (through pipe monuments at all angles in the fence and through concrete monuments in the line of the fence on each side of the Madden Road) to a pipe monument (marked "C" on the map) in latitude 9° 04' +2,288.5 feet and longitude 79° 37' +2,283.4 feet, at a point where the Cattle Industry fence intersects the Pedro Miguel River;

Thence N. 31° 37' 37" E. a distance of 13,650.6 feet, to Canal Zone 5-mile boundary monument No. 70, in latitude 9° 06' +1,816.9 feet and longitude 79° 36' +1,136.4 feet;

Thence following the Canal Zone 5-mile boundary line to monument "A," the point of beginning.

The circular further provides that the tract of land described above is set aside as a "Forest Preserve" in order to conserve the jungle beauties for the benefit of the public. The Madden Road passes through this area in a northerly and southerly direction. No cultivations, beyond those now existing, will be permitted in this preserve. The cutting of timber, the trimming, injuring, or carrying away of any kind of trees, palms, or other plants in this area is prohibited. Offenders will be prosecuted under section 426 of the Penal Code of the Laws of the Canal Zone.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending May 2, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Ancon	Panama R. R. S. S. Line		April 26		602
Reina del Pacifico	Pacific Steam Navigation Co.		April 26		142
Tela	United Fruit Co.	April 26	April 26	60	222
Kreta	Hamburg-American Line	April 26	April 26	25	414
Santa Clara	Grace Line	April 27	April 27	244	135
Konigsberg	North German Lloyd	April 27	April 28	180	66
Flandre	French Line	April 27	April 29	62	426
Saramacca	United Fruit Co.	April 27	April 30	532	(²)
Duchess D'Aosta	Navigazione Libera Triestina	April 28	April 28	(¹)	64
Cellina	Navigazione Libera Triestina	April 28	April 28	(¹)	92
Pastores	United Fruit Co.	April 28	April 29	85	710
Anachucuna	A. Tagaropulos	April 28	April 30	30	(²)
Acajutla	Pacific Steam Navigation Co.		April 29		543
Hokuroku Maru	Osaka Shosen Kaisha	April 29	April 29	132	22½
Iriona	United Fruit Co.	April 29	April 29	980	29
Metapan	United Fruit Co.	April 29	April 30	624	438
Nebraska	Royal Mail Steam Packet Co.	April 29	April 30	(¹)	108½
Heilo	Panama Mail S. S. Co.	April 29	May 2	462	(²)
Santa Barbara	Grace Line	April 30	April 30	282	259
Takeotoyo Maru	Nippon Yusen Kaisha	April 30	April 30	114	25
San Jose	French Line	April 30	May 1	55	641
Timavo	Navigazione Libera Triestina	April 30	May 1	75	8
Erfurt	Hamburg-American Line	April 30	May 1	141	179
Helder	Royal Netherlands S. S. Co.	April 30	May 1	12½	236
Jason	Royal Netherlands S. S. Co.	April 30	May 1	257	172
Bogota	Colombian S. S. Line	April 30	May 1	105½	½
Orazio	Italian S. S. Line	April 30	May 2	13½	854
Cauca	National Navigation Co.		May 1		227
Jefferson Myers	States S. S. Co.	May 1	May 1	105	(¹)
Ulua	United Fruit Co.	May 1	May 1	182	67
Tacoma	Hamburg-American Line	May 1	May 1	49	157
Geo. W. Barnes	Pan. American Petroleum Co.	May 1		9,740	
Invincible	Tampa Intercean S. S. Co.	May 1	May 2	109	(²)
Cefalu	Standard Fruit & S. S. Co.	May 1	May 2	162	507
Oreoma	Pacific Steam Navigation Co.	May 1	May 2	96	2
Caldas	National Navigation Co.	May 1		192	
Laurits Swenson	Fred Olsen & Co.	May 1	May 2	511	(²)
Cali	Roland Line		May 2		155
Santa Inez	Grace Line	May 2	May 2	109	6
West Ivis	McCormick S. S. Line	May 2		23	
Gruncwald	Hamburg-American Line	May 2		23	
Margaret Johnson	Johnson S. S. Line	May 2	May 2	(¹)	200
Pollux	Anglo-Saxon Petroleum Co.	May 2		12,415	
Wichita	Roosevelt S. S. Co.	May 2		225	

¹ No cargo discharged. ² No cargo laded.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., May 13, 1931. No. 41.

Comparison of Canal Traffic in April, 1931, with April Traffic in Previous Years.

Commercial traffic through the Canal during the month of April, 1931, was the lowest April traffic with respect to the number of transits and net tonnage, Panama Canal measurement, since 1926, when 425 vessels, aggregating 2,048,247 net tons, were passed through, and the lowest cargo tonnage since 1925 when 1,950,902 long tons of cargo were transited.

In comparison with April, 1930, traffic for the past month declined 36 transits (7.4 per cent), 186,291 net tons (7.5 per cent), and 445,665 cargo tons (18.1 per cent), and in comparison with April, 1929, last month's traffic showed a decrease of 87 transits (16.1 per cent), 195,371 net tons (7.9 per cent), and 708,551 cargo tons (26.1 per cent).

In the tabulation below are shown the number of transits, net tonnage (Panama Canal measurement), and the tons of cargo carried through the Canal during the month of April each year from 1915 to 1931, inclusive, and for comparison the monthly averages for the corresponding fiscal year ending June 30 following:

Calendar year.	Month of April.			Fiscal year.	Average per month for fiscal year.		
	Com- mercial transits.	Panama Canal net tonnage.	Tons of cargo.		Com- mercial transits.	Panama Canal net tonnage.	Tons of cargo.
1915	121	404,561	521,169	1915	102	361,197	465,567
1916	75	233,990	366,784	1916	63	199,687	257,843
1917	150	524,091	628,169	1917	150	483,213	538,213
1918	173	542,145	627,358	1918	172	547,839	627,669
1919	161	480,867	506,929	1919	169	510,416	576,335
1920	220	822,471	867,521	1920	206	712,170	781,208
1921	227	935,503	907,613	1921	241	931,323	966,601
1922	230	974,833	1,046,047	1922	228	951,455	907,075
1923	404	2,007,690	2,137,145	1923	331	1,550,482	1,630,656
1924	403	2,053,171	2,158,721	1924	435	2,179,073	2,249,559
1925	382	1,840,692	1,950,902	1925	389	1,904,596	1,996,570
1926	425	2,048,247	2,237,567	1926	433	2,064,549	2,169,787
1927	464	2,224,500	2,429,807	1927	456	2,185,651	2,312,351
1928	531	2,384,491	2,473,834	1928	538	2,454,886	2,469,226
1929	540	2,488,176	2,719,668	1929	534	2,468,483	2,555,250
1930	489	2,479,096	2,456,782	1930	515	2,498,335	2,502,519
1931	453	2,292,805	2,011,117	1931	470	2,334,834	2,139,837

¹ Canal opened August 15, 1914.

² Average for 10½ months.

³ Average for 10 months of fiscal year.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 6, 1931.

No. 879.

Colombia, Buenaventura, entrance buoy, light extinguished. The following message was received by the Hydrographic Office through the Captain of the Port:

Capt. C. Mantius, master of the Hamburg-American liner *Cerigo* reports that the red entrance buoy as well as buoy No. 7 at the port of Buenaventura are not burning.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, May 9, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Tons.	Net.	Nature.	Tons.	Gross.	Net.
Rudby	2	19.05	3	6.15	3	12.53	3	13.50	British	R. Ropner & Co.	390.0	55.0	13.6	Hartlepool, England	Vancouver, B. C.	Ballast.	5,888	4,305	
City of	2	20.45	3	6.20	3	13.00	3	14.00	American	Roosevelt S. S. Co., S. B.	401.9	54.2	21.0	New York, N. Y.	Melbourne, Aus. lin.	General.	1,800	7,007	
Haville	2	21.25	3	7.35	3	14.30	3	15.30	American	Amer-Hawaiian Line	404.6	53.9	19.2	Boston, Mass.	Seattle, Wash.	General.	2,687	4,767	
Hawaiian	2	21.30	3	7.15	3	14.55	3	15.52	American	Sun Oil Co.	429.3	59.2	20.0	Tampa, Fla.	Los Angeles, Calif.	Ballast.	7,005	5,283	
Atlantic Sun	3	4.10	3	8.35	3	15.17	3	16.35	American	Richfield Oil Co.	430.0	59.2	19.9	New York, N. Y.	San Francisco, Calif.	Ballast.	7,773	5,634	
Pat Doherty	3	5.10	3	8.45	3	17.08	3	18.23	American	Nelson Line	324.0	46.0	12.4	New York, N. Y.	San Francisco, Calif.	General.	3,265	3,984	
Tashmoo	3	5.55	3	8.40	3	16.15	3	17.10	Norwegian	Strange & Co.	388.3	54.0	19.0	New York, N. Y.	San Francisco, Calif.	Ballast.	6,050	5,036	
Bonnaville	3	23.59	3	10.15	3	17.15	3	18.12	Norwegian	Prac-Ang-Brazil Line	410.0	54.2	17.6	Moncevidio, Uruguay	San Francisco, Calif.	(9)	2,805	6,754	
West Isis	3	6.10	3	14.35	3	21.43	3	23.04	German	Hamburg-American Line	471.0	63.1	22.0	Hamburg, Germany	Vancouver, B. C.	General.	3,140	10,267	
Tai Ping	3	14.55	3	15.30	3	22.01	3	23.31	Norwegian	Barber Line	461.0	60.0	22.0	New York, N. Y.	Manila, P. I.	General.	3,637	9,894	
Ghost	3	16.00	3	16.00	3	12.58	3	14.00	American	C. W. Wirz	409.0	54.0	17.6	Philadelphia, Pa.	Balboa, C. Z.	Ballast.	3,400	6,002	
Sage Brush	3	19.30	3	19.40	4	9.11	4	10.18	American	Shepard S. S. Co.	341.0	27.0	15.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	3,400	6,002	
Nautlus	3	19.30	3	19.40	4	9.11	4	10.18	American	U. S. Navy	341.0	27.0	15.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	3,400	6,002	
Charles R.	3	19.55	4	6.15	4	15.06	4	16.15	American	Munson McCork'k Line	401.0	53.2	22.8	Philadelphia, Pa.	Seattle, Wash.	General.	5,100	7,082	
McCormick	3	21.00	4	6.30	4	15.30	4	18.19	British	Sir W. R. Smith & Sons	401.1	54.3	16.0	Hull, England	Los Angeles, Calif.	Ballast.	6,784	5,107	
Santa Clara	4	1.05	4	7.40	4	16.14	4	17.30	American	Isthmian S. S. Lines	395.5	55.0	23.1	Baltimore, Md.	Vancouver, B. C.	General, steel.	6,383	7,322	
Chickasaw	4	6.55	4	8.20	4	16.52	4	20.25	American	Calmar Line	410.0	54.2	20.4	Baltimore, Md.	Seattle, Wash.	General, steel.	4,921	6,604	
Flomar	4	5.35	4	11.40	4	17.49	4	18.56	Swedish	Vacuum Oil Co.	480.0	65.0	20.0	Capetown, Africa	Vancouver, B. C.	Ballast.	1,956	10,802	
Pegasus	4	5.35	4	11.40	4	17.49	4	18.56	Swedish	Royal Mail S. P. Co.	485.4	62.3	21.0	Rotterdam, Holland	Vancouver, B. C.	General.	5,878	4,281	
Lochkarine	4	18.45	4	11.40	4	18.06	5	1.47	British	Sir R. Ropner & Co.	405.0	53.5	17.0	Naples, Italy	Vancouver, B. C.	Ballast.	2,042	7,145	
Hindpool	4	12.20	4	12.30	4	19.55	6	17.15	British	Hamburg-American Line	469.8	48.7	21.5	New York, N. Y.	San Francisco, Calif.	General.	2,516	6,033	
Carl Legren	4	4.00	4	13.20	4	20.38	4	22.35	German	Panama Mail S. S. Co.	389.0	48.7	21.5	New York, N. Y.	San Francisco, Calif.	General.	6,884	5,130	
Carl Legren	4	4.00	4	13.20	4	20.38	4	22.35	German	Panama Mail S. S. Co.	389.0	48.7	21.5	New York, N. Y.	San Francisco, Calif.	General.	6,884	5,130	
Venezuela	3	17.55	4	14.30	4	22.09	4	23.30	British	Sir R. Ropner & Co.	435.0	55.5	17.0	Liverpool, England	Vancouver, B. C.	Ballast.	7,069	7,396	
Yearby	4	12.35	4	14.50	4	21.00	5	10.10	Danish	East Asiatic Co.	425.0	55.0	25.0	Copenhagen, Den.	Vancouver, B. C.	(6)	2,543	7,982	
Asia	4	11.30	4	19.50	5	9.00	5	10.10	Danish	East Asiatic Co.	425.0	55.0	25.0	Copenhagen, Den.	Vancouver, B. C.	(6)	2,543	7,982	
Canadian	4	23.45	5	6.12	5	13.20	5	14.30	British	Can. Nat. Steamships	430.0	56.0	23.0	Halifax, N. S.	Brisbane, Australia	General.	5,950	8,980	
Cruiser	5	9.10	5	9.25	5	15.59	5	17.00	Japanese	Osaka Shosen Kaisha	445.0	60.0	25.7	Baltimore, Md.	Shanghai, China.	General, iron.	9,626	6,839	
Tokai Maru	5	9.10	5	9.25	5	15.59	5	17.00	Japanese	Osaka Shosen Kaisha	445.0	60.0	25.7	Baltimore, Md.	Shanghai, China.	General, iron.	9,626	6,839	
Langleanger	5	12.10	5	12.20	5	19.19	5	22.45	Norwegian	Anglo-Saxon Pet. Co.	473.6	64.5	19.6	Brake, Germany	Los Angeles, Calif.	Ballast.	9,626	6,839	
Gen. G. W.	5	12.10	5	12.20	5	19.19	5	22.45	Norwegian	Anglo-Saxon Pet. Co.	473.6	64.5	19.6	Brake, Germany	Los Angeles, Calif.	Ballast.	9,626	6,839	
Getty	6	5.55	6	9.00	6	16.52	6	18.52	American	U. S. Army	89.0	22.0	0.0	Cristobal, C. Z.	Balboa, C. Z.	(7)	9,820	6,750	
Comet	6	5.55	6	9.00	6	16.52	6	18.52	American	U. S. Army	89.0	22.0	0.0	Cristobal, C. Z.	Balboa, C. Z.	(7)	9,820	6,750	
Svealand	6	2.35	6	7.55	6	14.40	6	16.00	Swedish	Standard Oil Co.	581.0	72.2	23.0	New York, N. Y.	Cruz Grande, Chile	Ballast.	15,425	4,421	
Robert	6	7.25	6	8.30	6	16.21	6	17.15	American	Lukenbach Line	446.0	58.0	22.6	Boston, Mass.	Portland, Oreg.	General.	5,340	6,695	
Lukenbach	6	7.25	6	8.30	6	16.21	6	17.15	American	Lukenbach Line	446.0	58.0	22.6	Boston, Mass.	Portland, Oreg.	General.	5,340	6,695	

¹Tug.

²Sea sled.

³Motor ship.

⁴Tug.

⁵General, coffee, bones, and cocoa.

⁶Coke, china clay, general.

⁷Towing barge.

Ship	Tanker	Cruiser	Launch	Motor ship	Yacht	General	San Francisco, Cal.	Boston, Mass.	Amer.-Hawaiian Line.	400.0	58.0	17.0	San Francisco, Cal.	General	2,637	6,899	4,627
Nevedan	6	8.30	6	9.00	6	18.15	American	6	17.16	6	18.15	American	San Francisco, Cal.	General	2,637	6,899	4,627
Barat	6	17.35	6	12.25	6	20.00	Dutch	6	18.50	6	20.00	Dutch	San Francisco, Cal.	General	63	1,183	742
Kurdistan	6	15.00	6	15.00	6	23.23	British	6	21.58	6	23.23	British	San Francisco, Cal.	Ballast	3,276	6,298	4,576
Wilkeno	7	1.10	7	6.15	7	14.35	American	7	18.50	7	14.35	American	San Francisco, Cal.	General	3,276	7,750	5,806
Nosa Chief	6	16.45	7	11.05	7	20.25	American	7	18.50	7	20.25	American	Tallahua, O.	General	2,164	3,256	2,010
Queen City	7	14.40	7	14.55	8	00.05	British	8	22.45	8	00.05	British	Vancouver, B. C.	Colse, bricks	5,150	7,022	5,250
Onida	7	6.45	7	11.25	7	20.25	American	7	18.54	7	20.25	American	Vancouver, B. C.	Auto, parts	2,942	5,656	1,621
Invela	7	16.50	7	18.15	8	12.30	British	8	12.30	8	12.30	British	Vancouver, B. C.	Ballast	5,064	9,570	6,618
Silverexpress	7	19.05	7	19.55	8	15.00	British	8	13.25	8	15.00	British	Singapore, Str. Set.	General	5,409	7,093	5,021
Ampullaria	7	21.05	8	6.50	8	13.45	British	8	18.00	8	13.45	British	Shanghai, China.	General	1,999	7,764	4,705
Levernbank	8	6.25	8	9.44	8	17.10	Chilean	8	15.54	8	17.10	Chilean	Los Angeles, Calif.	General	1,999	7,764	4,705
Aoneagua	7	18.20	8	10.25	8	18.07	American	8	15.54	8	18.07	American	Los Angeles, Calif.	Ballast	1,999	7,764	4,705
Rochester	8	5.45	8	10.10	8	19.22	American	8	17.27	8	19.22	American	Los Angeles, Calif.	General	271	211	124
Caldas	1	22.30	8	10.55	8	22.54	Colombia	8	19.22	8	22.54	Colombia	Buenaventura, Col.	Ballast	5,816	8,278	5,839
Triumph	8	10.20	8	11.40	8	20.25	American	8	19.25	8	20.25	American	Shanghai, China.	Case oil, general.	271	211	124
Fairfield	8	17.00	8	17.00	8	20.25	American	8	19.25	8	20.25	American	Shanghai, China.	Case oil, general.	5,816	8,278	5,839
Santa Elisa	8	11.10	9	6.00	9	13.05	American	9	13.05	9	13.05	American	Singapore, Str. Set.	Steel, general.	7,971	7,611	5,450
Pacific Grove	8	17.10	9	7.05	9	14.31	American	9	14.31	9	14.31	American	Valparaiso, Chile.	General	1,733	5,957	4,325
Cerigo	4	21.25	9	9.00	9	15.55	British	9	15.55	9	15.55	British	Vancouver, B. C.	General	1,295	10,086	7,226
Lobos	8	16.25	9	6.55	10	16.23	British	10	16.23	10	16.23	British	Guayaquil, Ecuador	General	350	1,572	1,011
Arimosa	9	16.25	9	6.55	10	16.23	British	10	16.23	10	16.23	British	Valparaiso, Chile.	General	6,220	7,151	4,756
Amosa	9	16.30	9	6.30	9	18.48	American	9	18.48	9	18.48	American	Gatun, C. Z.	Towing barge	6,220	7,151	4,756
Amosa	9	16.30	9	6.30	9	18.48	American	9	18.48	9	18.48	American	Gatun, C. Z.	Towing barge	6,220	7,151	4,756

1 Tanker. 2 Cruiser. 3 Launch. 4 Motor ship. 5 Yacht. 6 Copra, ore, and general.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship	Tanker	Cruiser	Launch	Motor ship	Yacht	General	San Francisco, Cal.	Boston, Mass.	Amer.-Hawaiian Line.	400.0	58.0	17.0	San Francisco, Cal.	General	2,637	6,899	4,627
City of San Francisco	10	21.40	3	6.10	3	13.15	American	5	21.10	296.1	45.9	16.2	San Francisco, Cal.	General	893	3,848	2,606
Roosevelt	2	16.35	3	6.39	3	14.20	American	3	14.20	416.8	56.1	25.0	Los Angeles, Calif.	Gasoline	8,475	6,931	4,999
Providence	3	4.00	3	7.13	3	14.30	American	3	17.00	517.0	72.0	26.2	Manila, P. I.	General	3,765	7,441	5,077
Dilworth	2	20.00	3	7.47	3	15.25	American	3	15.25	435.0	56.0	26.0	Los Angeles, Calif.	Gasoline	10,000	7,441	5,077
Point Salinas	3	1.00	3	8.14	3	15.50	American	3	15.50	386.8	52.2	19.0	Vancouver, B. C.	General	2,543	5,705	4,167
Forbes	3	4.00	3	8.49	3	16.40	American	3	16.40	409.8	54.2	28.0	Seattle, Wash.	Lumber, general.	7,500	6,831	4,969
Esperanza	3	9.55	3	14.05	3	20.50	American	3	17.08	330.6	44.6	17.0	San Francisco, Cal.	General	599	3,683	2,373
Port Napier	3	14.00	3	14.42	3	22.45	British	4	18.15	490.2	61.4	29.0	Sydney, Australia	Frozen, general.	8,000	10,977	8,115
Americaland	3	18.00	4	5.59	4	15.10	Swedish	4	15.10	561.0	72.0	35.0	Cruz Grande, Chile	Iron ore	21,650	15,560	4,496
Toniabua	3	16.50	4	6.42	4	18.15	American	4	18.15	500.0	71.2	30.0	Los Angeles, Calif.	Gasoline	16,178	11,667	8,542
Peacemans	4	7.30	4	8.20	4	18.35	British	4	18.35	400.0	52.4	25.0	Vancouver, B. C.	Wheat	7,553	5,885	4,144
Gen. G. W. Getty	4	8.35	4	8.35	5	9.00	American	5	9.00	98.0	22.0		Balboa, C. Z.	Ballast	5,912	6,484	4,675
San Rafael	4	13.15	4	13.57	4	21.25	American	4	19.30	410.0	54.0	22.0	Portland, Ore.	Lumber, general.	713	6,484	4,675
Cerigo	4	12.40	5	6.25	5	14.15	American	5	16.40	227.0	34.4	13.5	Guayaquil, Ecuador	General	912	1,011	572
Toikou	4	17.50	5	6.45	5	14.15	American	5	16.40	377.8	54.1	23.0	Pagunene, S. Sea I.	Ballast	7,476	6,225	4,536
Shogun	4	13.50	5	7.13	5	15.40	American	5	20.55	299.5	44.2	20.2	Key West, Fla.	Ballast	3,340	3,333	2,207
Lycena	5	3.00	5	8.04	5	16.25	American	5	16.25	480.6	66.0	29.0	Vancouver, B. C.	Lumber, general.	13,598	9,620	6,476
Sun	5	3.00	5	8.04	5	16.25	American	5	16.25	480.6	66.0	29.0	Los Angeles, Calif.	Gasoline	13,598	9,620	6,476

1 Tanker. 2 Cruiser. 3 Launch. 4 Motor ship. 5 Yacht. 6 Copra, ore, and general.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Salt		From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Beam.	draft.			Nature.	Tons.	Gross.	Net.	
American.	4	23.00	5	8.32	5	15.40	5	15.40	American.	Amer.-Hawaiian Line.	404.6	53.9	26.0	Portland, Ore.	Boston, Mass.	General.	5,625	6,777	4,761	
Dorothy									American.											
Loekenbach.	5	6.20	5	9.04	5	16.55	5	16.55	American.	Loekenbach Line.	448.9	60.2	29.0	Portland, Ore.	Boston, Mass.	Lumber, general.	9,000	9,294	6,861	
Barat.	5	8.50	5	9.53	5	17.35	5	17.35	Dutch.	Royal Neth. S. S. Co.	202.9	33.1	14.0	Buenaventura, Col.	Cristobal, C. Z.	(*)	575	1,182	742	
El Salvador.	5	11.10	6	6.27	6	13.25	6	13.25	American.	Panama Mail S. S. Co.	360.2	51.6	23.0	San Francisco, Cal.	New York, N. Y.	General.	3,086	5,710	4,011	
Betterton.	5	19.20	6	6.34	6	14.20	6	14.20	American.	Tidevaker Oil Co.	431.0	59.2	26.0	San Francisco, Cal.	New York, N. Y.	Gasoline.	10,500	7,863	5,104	
Moveria ¹⁴ .	5	16.50	6	7.15	6	15.30	6	15.30	British.	Donaldson Brothers.	385.6	61.6	27.0	San Francisco, Cal.	Glasgow, Scotland	General.	5,569	6,576	4,724	
Onondaga.	5	17.30	6	7.50	6	15.45	6	15.45	American.	Ford Motor Co.	251.0	43.6	21.0	Aberdeen, Wash.	Philadelphia, Pa.	(*)	2,888	2,636	1,621	
Salvador.	6	10.05	6	10.47	6	17.20	6	17.20	British.	Pacific Steam Nav. Co.	215.0	33.5	13.0	Champerico, Guat	Cristobal, C. Z.	General.	296	1,270	735	
Standard									American.											
Arrow ¹ .	6	14.10	6	14.59	6	23.15	6	23.15	American.	Standard Transp. Co.	467.6	62.7	29.0	New York, N. Y.	New York, N. Y.	Gas oil.	12,487	9,698	6,783	
Gen. M. H.									American.											
Sherman.	6	16.10	6	17.18	7	11.35	7	11.35	American.	Arrow Line	402.6	53.0	28.0	Portland, Ore.	Baltimore, Md	Lumber, copper.	8,100	6,575	4,912	
Cornwall.	6	23.30	7	6.40	7	13.55	7	13.55	British.	N. Z. Shipping Co.	495.1	63.1	25.0	Opunohu, N. Z.	London, England.	Frozen, general.	5,317	12,217	8,519	
S-11 ¹⁵ .									American.	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.					
S-13 ¹⁵ .									American.	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.					
Chevink ¹⁶ .									American.	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.	Ballast.				
S-48 ¹⁵ .									American.	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.					
Beemrook	7	6.50	7	7.40	7	13.00	7	13.00	British.	Seafus & Co.	420.0	54.0	19.0	Wellington, N. Z.	Dunkirk, France.	(*)	5,300	6,425	4,068	
Sabias ¹ .	7	9.00	7	9.31	7	18.20	8	10.25	American.	U. S. Navy	477.1	60.0	29.0	Los Angeles, Calif.	Cristobal, C. Z.	Fuel oil.	10,943			
Pennsylvania ¹ .	7	11.50	7	12.45	7	19.55	8	10.25	American.	The Texas Co.	416.8	56.1	23.0	Port Arthur, Tex.	Port Arthur, Tex.	Gasoline.	8,000	6,756	4,844	
Port Brisbane.	7	17.25	7	18.50	8	11.10	8	16.15	British.	Com Hk & Dum. Line.	480.7	62.4	29.0	Melbourne, Ausla.	Glasgow, Scotland	Frozen, general.	8,300	10,708	7,984	
Hendonball.	7	17.40	7	19.05	8	11.55	8	13.15	British.	Incor. Freightling Corp	399.6	53.0	26.0	Valparaiso, Chile.	Wilmington, N. C.	(*)	8,034	5,852	4,112	
Montana.	7	18.00	8	5.59	8	14.00	8	14.00	American.	Amer.-Hawaiian Line.	404.6	53.9	23.0	Seattle, Wash.	Boston, Mass.	General.	5,191	6,756	4,775	
Fernwood.	7	18.15	8	6.44	8	17.15	8	17.15	Norwegian.	Fern Line	390.5	55.2	26.0	Kolschchang, Spain	Habana, Cuba.	Rice.	7,750	6,840	4,979	
Alrabahn	8	4.00	8	7.15	8	16.00	9	20.20	Norwegian.	Fred Olsen & Co.	435.7	56.2	27.0	Vancouver, B. C.	Oslo, Norway	General.	7,247	8,065	5,933	
Boussod.	8	8.00	8	9.00	8	17.05	8	17.05	French.	Massageries Maritimes	350.2	52.5	23.0	Papeete, Tahiti.	Marseilles, France.	Copra, general.	4,440	5,304	3,681	
Pacific									American.											
Shipper ¹⁴ .	8	15.00	8	19.25	9	11.35	9	11.35	British.	Furness, Withy & Co.	420.0	58.0	27.0	Vancouver, B. C.	Manchester, Eng.	General.	8,470	7,892	5,858	
Western Sun ¹⁴ .	8	16.45	9	6.29	9	14.10	9	14.10	American.	Sun Oil Co.	442.6	66.0	30.0	Los Angeles, Calif.	Marens Hook, Pa.	Gasoline.	13,206	9,607	6,551	
Morgenen ¹⁴ .	9	7.00	9	8.28	9	15.45	9	15.45	Norwegian.	Pet. Storage & Fin. Corp.	480.7	58.8	26.2	Los Angeles, Calif.	Lands End, Eng. ¹⁷	Gasoline.	10,161	7,539	5,044	
Manzanos.	9	9.21	9	10.45	9	17.43	9	17.43	German.	Roland Line	216.5	32.9	13.3	Guayaquil, Equad. ¹⁷	Cristobal, C. Z.	General.	536	1,132	741	
Democracy	9	22.30	9	14.49	9	21.40	9	21.40	American.	Nelson S. S. Co.	377.0	52.0	24.0	Seattle, Wash.	New York, N. Y.	Lumber, general.	5,500	5,434	3,969	
Cauca ¹⁴ .	9	15.30	9	16.14	10	10.50	10	10.50	Colombian.	National Navigation Co.	107.0	22.9	10.0	Buenaventura, Col.	Cristobal, C. Z.	Coffee, general.	147	262	161	

¹ Tanker. ¹⁴ Motor ship. ¹⁵ Submarine. ¹⁶ Tug. ¹⁷ For orders. ¹⁸ Cacao, laguna, and coffee. ¹⁹ Lumber and automobile parts. ²⁰ Wheat, wool, and tallow. ²¹ Nitrates and automobile parts. All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 3	Iriona	United Fruit Co.	Port Limon, Costa Rica.	May 3	Inapaquina ²²	A. Tagaropulos	Colon, Rep. of Panama.
May 3	Darien C-35 ²³	Scandia Airplane Co.	Colon, Rep. of Panama.	May 3	Grunevald	Hamburg-American Line.	Cartagena, Colombia.
May 4	Royal Netherlands S. S. Co.	Royal Netherlands S. S. Co.	Barranquilla and wayp'ls.	May 3	No. 9694 ²³	Pan American Airways	San Salvador and wayp'ls.
May 5	Metapan	United Fruit Co.	Hamburg via waypoints.	May 3	No. 669-M ²³	Pan American-Grace Airways	Miami via waypoints.
May 5	No. 300-N ²³	Pan American-Grace Airways	Cartagena, Colombia.	May 3	No. 300-N ²³	Pan American-Grace Airways	Pimentel via waypoints.
May 5	Pearl Marie ²⁴	G. I. Bryan.	Pimentel via waypoints.	May 3	George W. Barnes	United Fruit Co.	New Orleans, La.
May 5	Anachucuna ²²	A. Tagaropulos	Colon, Rep. of Panama.	May 5	Pollux	Pan-American Pet. & Trans. Co.	Aruba, D. W. I.
May 5	Cristobal	Panama R. S. S. Line	Colon, Rep. of Panama.	May 5	Pearl Marie ²⁴	Anglo-Saxon Petroleum Co.	Aruba, D. W. I.
May 6	Rugia	Hamburg-American Line	New York via waypoints.	May 5	Anachucuna ²²	A. Tagaropulos	Bluefields, Nicaragua.
May 6	Sixola	United Fruit Co.	Hamburg via waypoints.	May 5	No. 9685 ²³	Pan American Airways	Colon, Rep. of Panama.
May 6	No. 670-M ²³	United Fruit Co.	New York via Kingston.	May 6	No. 668-M ²³	Pan American Airways	Miami via waypoints.
May 6	No. 9688 ²³	Pan American Airways	New Orleans, La.	May 6	Metapan	United Fruit Co.	New York via Kingston.
May 8	Cayana	Elders & Fyffes, Ltd.	Miami via waypoints.	May 6	Crynsen	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
May 8	Contessa	United Fruit Co.	Arromouth via waypoints.	May 6	Inapaquina ²²	A. Tagaropulos	Colon, Rep. of Panama.
May 8	Standard Fruit & S. S. Co.	Standard Fruit & S. S. Co.	New Orleans, La.	May 7	Sixola	United Fruit Co.	Colombian ports.
May 8	Crynsen	Colombian S. S. Line	Port Limon, Costa Rica.	May 7	Tela	Hamburg-American Line	Tampico via waypoints.
May 8	Tillie Lykes	Lefkys Brothers S. S. Co.	New York via waypoints.	May 7	Cayana	Elders & Fyffes, Ltd.	Port Limon via Bocas.
May 9	Annetta I. ²²	P. W. Hamilton	Galveston, Tex.	May 8	Calamares	United Fruit Co.	Arromouth via waypoints.
May 9	Martinique	United Fruit Co.	Colon, Rep. of Panama.	May 8	No. 300-N ²³	Pan American-Grace Airways	Pimentel via waypoints.
May 9	Garmelia ²⁴	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	May 8	Darien C-35 ²³	Scandia Airplane Co.	Barranquilla via waypoints.
May 9	No. 300-N ²³	Pan American-Grace Airways	Pimentel via waypoints.	May 9	Contessa	Royal Netherlands S. S. Co.	New Orleans and wayp'ls.
May 9	No. 669-M ²³	Pan American Airways	Miami via waypoints.	May 9	Martinique	Colombian S. S. Line	Hamburg via waypoints.
				May 9	Garmelia ²⁴	Standard Fruit & S. S. Co.	New York via waypoints.
				May 9	Annetta I. ²²	P. W. Hamilton.	Colon, Rep. of Panama.
							Colon, Rep. of Panama.

PORT OF BALBOA.

May 5	Real ²⁵	Hans Elliot.	Panama Bay, R. P.	May 5	Read ²⁵	Hans Elliot.	Panama Bay, R. P.
May 6	San Mateo.	United Fruit Co.	San Francisco, Calif.	May 7	San Mateo	United Fruit Co.	San Francisco, Calif.

* Other than ships passing through the Canal.

²² Motor boat. ²³ Air mail carrier. ²⁴ Motor schooner.

²⁵ Motor schooner.

"President Jackson" Transits Canal in New Service.

The passenger and freight steamship *President Jackson* of the Dollar Steamship Line transited the Canal May 3, 1931, en route from Manila to New York, via Hong Kong, Shanghai, Kobe, Yokohama, Honolulu, San Francisco, and Los Angeles, inaugurating a new fortnightly service of the company over this route. This new service will in no way affect the present around-the-world service westbound which has been operating for over seven years. The combined services will provide a weekly sailing from New York to the Far East, via the Canal, California ports, and Honolulu, alternating vessels continuing around the world as in the past and the others turning around at Manila and returning to New York over the route taken by the *President Jackson*, as above. The new layout gives four transits westbound through the Canal per month and two eastbound.

The *President Hoover* and *President Coolidge*, under construction for this company, will be added to the new service upon completion. The former is to sail from New York on her maiden voyage in August and be followed by the *President Coolidge* in October.

Calmar Line Increases Sailings.

The Calmar Line, operator of a fleet of freight steamers in the United States intercoastal trade, is reported to have increased its sailings from every two weeks to every nine days, effective with the sailing of its vessel from Philadelphia on April 15. The report states that the new schedule of the line will provide express service from Philadelphia to Los Angeles, San Francisco, Oakland, Portland, and Seattle. Twelve freighters are to be used in the service, with an average speed of 11.5 knots.

Correction.

In issue of THE PANAMA CANAL RECORD for May 6, 1931, page 579, in an article captioned "Forest Preserve," reference was made to an article, "Natural Timber Preserve Flanking Madden Road" said to have appeared in THE PANAMA CANAL RECORD of June 25, 1931. This date should have been June 25, 1930.

Tanker Traffic Through the Panama Canal in April, 1931.

During the month of April, 1931, 69 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 403,726, on which tolls of \$363,672.41 were paid. Cargo amounted to 419,797 tons, which included 381,647 tons of mineral oils, 19,000 tons of whale oil, 12,600 tons of molasses, and 6,550 tons of coconut oil.

In point of net tonnage, tanker traffic decreased 18.8 per cent in comparison with the tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 13.3 per cent.

Tank ships comprised 15.2 per cent of the total commercial transits through the Canal during the month; made up 17.6 per cent of the total Panama Canal net tonnage; were the source of 18.1 per cent of the tolls collected; and carried 20.9 per cent of the total cargo through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of April, 1931, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for April, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	5	31,275	\$25,806.91	16,767
Danzig.....	1	8,224	5,921.28	.....
Norwegian.....	6	33,835	24,361.20	.....
United States.....	19	105,189	75,736.08	.....
Total, April, 1931.....	31	178,523	131,825.47	16,767
Total, March, 1931.....	35	193,420	144,362.80	9,382
Total, February, 1931.....	31	173,451	126,407.49	8,327
Total, April, 1930.....	39	213,878	162,405.20	28,454
<i>Pacific to Atlantic.</i>				
British.....	10	56,795	60,436.74	1 98,616
Danish.....	1	6,024	6,295.00	12,428
Danzig.....	1	8,224	8,835.00	15,248
French.....	1	4,962	5,471.25	8,963
German.....	1	4,169	4,282.50	7,089
Norwegian.....	3	22,769	22,346.25	2 39,118
United States.....	21	122,260	124,180.20	3 221,568
Total, April, 1931.....	38	225,203	231,846.94	403,030
Total, March, 1931.....	30	168,520	168,110.98	293,411
Total, February, 1931.....	29	160,941	168,039.88	293,328
Total, April, 1930.....	46	264,438	264,724.95	455,872

¹ Includes 12,600 tons of molasses. ² Includes 19,000 tons of whale oil. ³ Includes 6,550 tons of coconut oil.

The following tabulation shows the tanker traffic through the Canal during April, 1931, classified according to trade routes:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
United States intercoastal.....	18	100,236	\$72,169.92	.....
United States to South America.....	3	21,928	15,788.16	.....
Cristobal to United States.....	1	4,953	3,566.16	.....
West Indies to South America.....	1	4,350	4,483.75	7,584
West Indies to Balboa.....	1	4,997	5,535.00	9,183
Europe to United States.....	6	33,835	24,361.20	.....
Europe to South America.....	1	8,224	5,921.28	.....
<i>Pacific to Atlantic.</i>				
United States intercoastal.....	19	110,023	111,532.70	198,587
United States to Cristobal.....	1	4,953	5,410.00	10,029
United States to West Indies.....	1	5,312	5,598.75	9,901
United States to Europe.....	8	41,946	45,692.65	73,497
South America to United States.....	1	4,326	4,633.75	8,001
South America to Canada.....	3	23,626	25,346.25	49,617
South America to Europe.....	1	8,224	8,835.00	15,248
Balboa to West Indies.....	1	4,997	3,597.84	.....
Hawaiian Islands to Europe.....	1	6,379	6,612.50	4 12,600
Australasia to United States.....	1	11,790	10,661.25	5 19,000
Philippine Islands to United States.....	1	3,627	3,926.25	6 6,550

⁴ Molasses. ⁵ Whale oil. ⁶ Coconut oil.

Of the tanker traffic passing through the Canal in April, 1931, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for April, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
April, 1931.....	24	134,042	\$96,510.24	.....
March, 1931.....	26	146,574	107,033.60	3,000
February, 1931.....	25	137,361	98,899.92	.....
April, 1930.....	29	160,376	116,391.53	300
<i>From Los Angeles.</i>				
April, 1931.....	26	147,531	152,761.60	266,202
March, 1931.....	20	115,950	115,424.75	199,722
February, 1931.....	23	128,221	134,310.20	239,521
April, 1930.....	33	181,662	182,359.75	321,197

Visits of Groups of Tourists to Locks.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 4, 1931.

TO ALL STEAMSHIP AGENTS:

1. On occasions during the tourist season when large numbers of passengers are escorted in groups to Gatun Locks, it has been found to be practically impossible to keep them from approaching dangerously near the lock chambers, notwithstanding warning signs posted in conspicuous places and the efforts of the police. No accidents have occurred in the past, but there is always the possibility of a serious mishap while this condition exists. Erection of a guard rail has been found to be impracticable, as an adjunct of this kind built close to the edge of the lock wall would interfere with the cables from the towing locomotives to ships in the lock, and if built back of the towing tracks would prevent tourists from viewing closely the operation of the locks and also interfere with the free circulation of the operating forces and those having business with the locks.

2. The Canal authorities are pleased to have tourists view the locks, but can not permit their visits to interfere with the prompt and efficient handling of Canal traffic, which is and must be the first consideration.

3. It is desired to call attention to the fact that the duty of protecting tourist parties at the locks rests with the steamship companies or tourist agencies taking the tourists to the locks, and due care should be exercised at all times in providing a sufficient number of guides to safeguard their charges.

H. BURGESS,
Governor.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 2, 1931.

No. 875.

Nicaragua, Corinto Harbor, decreased depth reported, information concerning buoys. The following is quoted from Daily Memorandum No. 6911, dated Washington, D. C., April 22, 1931:

The commanding officer of the U. S. S. *Rochester* reports the existence of a shoal about 25 yards in extent, having a least depth of 24 feet, in latitude 12° 28' 03" N., longitude 87° 13' 25" W., where a depth of 26 feet is shown on H. O. Chart No. 2604.

The commanding officer also reports the following changes in buoyage:

Light Buoy No. 2 is moored 400 yards 304° from Cardon Head light; Buoy No. 5 was replaced on April 7, 1931, at a point 300 yards 72° 15' from Cardon Head light, in 29 feet of water; Buoy No. 18 has been replaced in 24 feet of water, 550 yards 95° 30' from the dock light.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 12, 1931.

No. 885.

REVISION OF NOTICE TO MARINERS No. 883.¹

Colombia, west coast, Buenaventura, Isla Palmas, change in characteristic of light. The captain of the S. S. *Manizales* reports the characteristic of Isla Palmas Light has been changed from 2 flashes to 1 flash. Observed May 6 and May 7, 1931.

Characteristics: White flash; 0.5 sec. light, 8.5 sec. eclipse, period 9 sec.

Isla Palmas: Longitude 3° 53' 28" N., latitude 77° 22' 12" W.

H. BURGESS,
Governor.

¹Notice to Mariners No. 883 was not published in THE PANAMA CANAL RECORD.

Commercial Traffic Through the Panama Canal in April, 1931, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of April, 1931, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for April, 1930 and 1929. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal: United States.....	65	358,028	271,960	440,837	273,288	\$310,454.77	180,774
Europe to Canada:							
British.....	18	86,140	62,828	102,049	62,797	64,784.02	5,312
Danish.....	2	10,963	9,456	13,556	9,446	9,353.95	6,197
Dutch.....	2	13,679	10,642	16,989	10,604	13,302.50	5,554
French.....	1	7,027	3,873	8,061	4,295	4,841.25	1,676
German.....	1	6,387	3,728	6,757	4,027	4,660.00	2,868
Italian.....	1	9,856	7,927	12,951	8,025	9,908.75	653
Norwegian.....	1	6,140	5,261	8,516	5,341	6,576.25	5,562
Swedish.....	1	5,661	3,406	5,642	4,320	4,257.50	2,428
United States.....	1	4,659	3,879	6,236	3,902	3,354.48	.....
Total.....	28	150,512	111,000	180,757	112,757	121,038.70	30,250
United States to South America:							
British.....	3	21,928	18,948	34,218	19,633	15,788.16	.....
Chilean.....	3	13,194	9,219	16,237	9,458	11,523.75	5,471
Danish.....	1	4,467	2,690	4,473	2,737	3,362.50	3,000
Swedish.....	1	4,496	3,743	15,337	4,385	3,237.12	.....
United States.....	12	54,399	40,927	74,704	40,835	44,515.75	18,202
Total.....	20	98,484	75,527	144,969	77,048	78,427.28	26,673
United States to Far East:							
British.....	3	18,000	9,870	17,319	9,611	12,337.50	13,309
Danish.....	1	5,500	3,081	5,038	3,155	3,851.25	7,285
Japanese.....	10	50,368	41,461	62,686	40,505	51,662.05	62,086
Norwegian.....	2	9,397	5,096	8,560	5,123	6,370.00	9,253
Panamanian.....	1	6,967	3,610	6,604	4,057	4,512.50	3,867
United States.....	3	16,137	10,765	17,610	10,773	13,456.25	20,862
Total.....	20	106,369	73,883	117,817	73,224	92,189.55	116,662
Europe to United States:							
British.....	3	14,071	10,458	16,844	10,520	10,131.12	.....
German.....	2	13,000	8,666	14,668	8,919	10,832.50	7,063
Norwegian.....	9	47,015	36,311	59,979	36,055	33,595.41	.....
Swedish.....	1	5,384	3,455	5,750	4,226	4,318.75	5,600
Total.....	15	79,470	58,890	97,241	59,720	58,877.78	12,663
Europe to Australasia:							
British.....	11	91,619	64,713	107,155	66,345	78,560.44	20,977
French.....	1	5,633	4,305	7,138	4,380	5,381.25	1,700
Swedish.....	1	5,122	3,129	5,293	4,046	3,911.25	588
Total.....	13	102,374	72,147	119,586	74,771	87,852.94	23,265
Europe to South America:							
British.....	2	18,190	13,065	24,372	14,796	16,331.25	9,323
Danzig.....	1	8,224	7,068	12,175	6,974	5,921.28	.....
Dutch.....	2	9,640	5,431	9,243	5,630	6,788.75	3,520
French.....	1	4,834	3,223	5,390	3,219	4,028.75	1,274
German.....	4	19,730	13,342	21,756	13,067	16,677.50	7,682
Italian.....	1	7,516	5,514	12,003	6,058	6,892.50	1,724
Norwegian.....	1	3,797	3,039	5,041	3,101	3,798.75	4,252
Total.....	12	71,931	50,682	89,980	52,845	60,438.78	27,775
Cristobal, C. Z. to South America:							
Colombian.....	4	607	599	906	607	720.85	785
Dutch.....	1	242	294	780	323	367.50	141
German.....	4	3,491	2,260	4,347	2,334	2,825.00	858
Total.....	9	4,340	3,153	6,033	3,264	3,913.35	1,784

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States to Philippine Islands:							
British.....	4	23,141	14,136	24,821	14,535	\$17,670.00	18,822
United States.....	2	11,343	7,967	11,503	7,017	9,958.75	13,428
Total.....	6	34,484	22,103	36,324	21,552	27,628.75	32,250
United States to Canada:							
British.....	1	4,665	3,862	6,221	3,889	3,358.80	.....
Norwegian.....	1	4,663	2,490	4,258	2,490	3,112.50	.....
United States.....	3	14,098	10,311	16,561	10,312	12,888.75	17,659
Total.....	5	23,426	16,663	27,040	16,691	19,360.05	17,659
Cristobal, C. Z. to United States:							
United States.....	5	14,022	12,489	20,433	12,438	11,040.44	370
United States to Australasia:							
British.....	3	19,535	12,173	19,689	12,195	15,216.25	8,766
United States.....	1	5,002	3,670	5,867	3,660	4,587.50	2,513
Total.....	4	24,537	15,843	25,556	15,855	19,803.75	11,279
Cristobal, C. Z. to Central America:							
British.....	3	2,147	1,924	3,468	1,958	2,405.00	2,104
Norwegian.....	1	722	579	990	509	519.84	.....
Total.....	4	2,869	2,503	4,458	2,527	2,924.84	2,104
West Indies to United States:							
British.....	1	4,838	3,592	5,643	3,615	4,490.00	5,000
Norwegian.....	1	5,131	2,829	4,819	2,829	3,536.25	.....
United States.....	1	86	84	123	84	63.00	.....
Total.....	3	10,055	6,505	10,585	6,528	8,089.25	5,000
Canadian Intercoastal:							
British.....	3	12,858	8,400	17,990	9,935	10,500.00	2,201
Around-the-World:							
United States.....	3	30,518	23,932	40,237	23,907	29,915.00	9,885
Foreign vessels without cargo—U. S. intercoastal:							
Norwegian.....	2	6,887	4,779	8,015	4,759	4,958.64	.....
South America to United States:							
United States.....	2	7,652	4,896	8,038	4,898	6,120.00	4,061
Central American intercoastal:							
Colombian.....	1	124	113	207	109	141.25	200
Danish.....	1	1,879	1,144	1,909	1,172	1,430.00	1,974
Total.....	2	2,003	1,257	2,116	1,281	1,571.25	2,174
Europe to Central America:							
German.....	2	4,629	2,725	4,718	2,710	3,406.25	4,060
United States to Hawaii:							
United States.....	1	2,119	1,669	2,848	1,642	2,086.25	3,504
United States to Central America:							
United States.....	1	1,549	1,167	1,974	1,161	1,115.28	.....
Central America to United States:							
United States.....	1	2,329	1,890	3,203	1,884	2,362.50	737
Canada to Australasia:							
British.....	1	4,195	3,355	5,493	3,347	4,193.75	3,028
South America to Canada:							
Norwegian.....	1	5,260	2,881	4,877	2,994	3,601.25	2,890
South America to Far East:							
Japanese.....	1	5,821	4,170	7,267	4,387	5,212.50	3,040
West Indies to Canada:							
British.....	1	4,118	3,206	5,038	3,187	4,007.50	6,000
West Indies to South America:							
British.....	1	4,350	3,587	5,890	3,611	4,483.75	7,584
West Indies to Central America:							
British.....	1	65	58	109	65	72.50	60
West Indies to Balboa, C. Z.:							
British.....	1	4,997	4,428	7,519	4,342	5,535.00	9,183
Europe to Hawaii:							
Swedish.....	1	4,860	2,781	4,960	3,665	3,476.25	6,694

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Cristobal, C. Z. to Balboa, C. Z. United States.....	1	32	32	(*)	(*)	\$38.40	.....
Grand total, April, 1931.....	235	1,185,143	868,561	1,451,908	880,283	994,696.30	553,609
Grand total, April, 1930.....	240	1,226,284	910,658	1,511,780	917,996	1,061,309.99	806,119
Grand total, April, 1929.....	259	1,190,510	907,312	1,479,562	911,498	1,046,690.90	862,450

* Barge having no registered tonnage.

PACIFIC TO ATLANTIC.

United States intercoastal: United States.....	61	345,867	262,403	421,527	261,458	\$327,716.45	455,761
Canada to Europe:							
Belgian.....	1	4,103	3,247	5,942	3,607	4,058.75	6,920
British.....	12	67,502	46,508	75,422	46,652	58,135.00	94,812
Danish.....	3	19,080	15,134	23,673	15,635	18,917.50	28,024
Dutch.....	1	8,266	6,197	10,220	6,385	7,746.25	9,968
French.....	3	19,083	10,951	22,004	11,869	13,688.75	21,773
German.....	2	13,010	7,820	13,912	8,245	9,775.00	15,862
Italian.....	2	12,154	8,975	14,933	9,413	11,218.75	15,796
Norwegian.....	5	24,748	15,992	26,197	16,143	19,990.00	36,745
Swedish.....	2	9,685	6,799	11,449	8,432	8,498.75	16,126
United States.....	2	11,612	7,837	12,560	7,771	9,796.25	16,535
Total.....	33	189,243	129,460	216,312	134,152	161,825.00	262,561
South America to United States:							
British.....	5	19,066	14,253	23,159	14,252	17,039.61	30,753
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	4,806
Danish.....	3	14,250	8,282	13,724	8,326	10,352.50	23,900
Swedish.....	1	4,421	3,743	15,339	4,377	4,678.75	22,146
United States.....	10	42,297	33,272	60,804	33,214	41,076.90	90,033
Total.....	20	84,739	63,016	120,336	64,145	77,480.26	171,638
Philippine Islands to United States:							
Danish.....	2	6,576	5,080	8,429	5,184	6,350.00	11,414
Japanese.....	7	34,809	29,118	42,223	27,869	36,231.25	55,592
Norwegian.....	2	11,609	6,474	10,865	6,566	8,092.50	13,866
United States.....	4	21,525	19,084	27,386	18,992	23,855.00	34,637
Total.....	15	74,519	59,756	88,903	58,611	74,528.75	115,509
South America to Europe:							
British.....	3	14,421	11,802	19,495	11,884	14,752.50	15,218
Danzig.....	1	8,224	7,068	12,175	6,974	8,835.00	15,248
Dutch.....	3	13,103	7,873	13,150	7,977	9,841.25	17,774
French.....	1	4,854	3,224	5,399	3,225	4,030.00	8,585
German.....	2	10,480	7,827	12,164	7,399	9,783.75	14,103
Italian.....	2	18,702	10,399	23,387	13,529	12,998.75	2,834
Japanese.....	1	4,400	4,358	5,864	4,259	5,280.00	7,640
Swedish.....	1	3,967	3,072	5,065	4,065	3,840.00	6,915
Total.....	14	78,151	55,623	96,699	59,312	69,361.25	88,317
Australasia to Europe:							
British.....	12	100,563	69,461	114,718	71,087	86,826.25	67,827
United States to Europe:							
British.....	5	23,491	21,316	32,688	21,290	26,541.40	40,826
French.....	1	4,962	4,377	7,011	3,989	5,471.25	8,963
German.....	1	4,169	3,426	5,978	3,368	4,282.50	7,089
Norwegian.....	2	9,379	7,951	13,193	7,885	9,938.75	15,832
Swedish.....	1	5,485	3,406	5,558	4,246	4,257.50	7,511
United States.....	1	8,619	7,026	11,247	6,953	8,782.50	15,365
Total.....	11	56,105	47,502	75,675	47,731	59,273.90	95,586
South America to Cristobal, C. Z.:							
Colombian.....	3	446	437	673	441	536.95	577
Dutch.....	1	742	294	780	323	367.50	550
German.....	5	4,189	2,878	5,370	2,950	3,597.50	2,734
Total.....	9	5,377	3,609	6,823	3,714	4,501.95	3,861

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Central America to Cristobal, C. Z.:							
British.....	2	1,441	1,286	2,298	1,304	\$1,607.50	599
Colombian.....	1	124	113	207	109	89.28	.....
Norwegian.....	1	722	579	990	569	723.75	440
United States.....	2	2,515	1,874	3,283	1,852	2,154.27	519
Total.....	6	4,802	3,852	6,778	3,834	4,574.80	1,558
United States to Cristobal, C. Z.:							
United States.....	5	14,210	12,411	20,408	12,443	15,460.70	13,136
Hawaii to United States:							
United States.....	3	15,817	10,385	16,898	10,355	12,981.25	24,227
South America to Canada:							
British.....	2	17,602	15,241	28,377	15,913	19,051.25	37,189
Danish.....	1	6,024	5,036	8,278	5,064	6,295.00	12,428
Total.....	3	23,626	20,277	36,655	20,977	25,346.25	49,617
Balboa, C. Z. to Cristobal, C. Z.:							
Panamanian.....	2	69	65	106	66	51.90	.....
United States.....	1	20	20	20	20	15.00	.....
Total.....	3	89	85	126	86	66.90	.....
South American intercoastal:							
German.....	1	1,837	1,285	2,159	1,263	1,618.75	570
United States.....	1	1,049	728	728	728	755.28	.....
Total.....	2	2,886	2,023	2,887	1,991	2,374.03	570
Canadian intercoastal:							
British.....	2	8,259	6,580	10,921	6,711	8,225.00	12,196
United States to South America:							
United States.....	2	7,633	4,865	7,950	4,861	6,081.25	6,870
Australasia to United States:							
Norwegian.....	2	16,826	11,328	19,027	10,921	14,160.00	26,373
Australasia to Canada:							
British.....	2	8,516	6,534	10,862	6,602	8,167.50	3,939
Far East to United States:							
Japanese.....	2	12,525	10,278	16,730	10,092	12,847.50	10,528
Far East to Europe:							
British.....	1	5,487	2,974	4,749	2,876	3,717.50	5,450
Danish.....	1	4,418	3,585	5,702	3,583	4,481.25	7,908
Total.....	2	9,905	6,559	10,451	6,459	8,198.75	13,358
Foreign vessels without cargo—							
U. S. intercoastal:							
Spanish.....	1	.....	.....	.....	.....	1,648.50	.....
Canada to United States:							
Danish.....	1	4,691	2,705	4,532	2,772	3,381.25	5,650
United States to West Indies:							
Norwegian.....	1	5,312	4,479	7,342	4,253	5,598.75	9,901
United States to India:							
British.....	1	4,681	2,650	4,345	2,637	3,312.50	2,551
Canada to South America:							
Norwegian.....	1	5,131	2,906	4,884	3,004	3,632.50	2,399
Central America to Europe:							
German.....	1	2,337	1,361	2,359	1,354	1,701.25	975
Hawaii to Europe:							
British.....	1	6,379	5,290	8,940	5,229	6,612.50	12,600
Balboa, C. Z. to West Indies:							
British.....	1	4,907	4,428	7,519	4,342	3,597.84	.....
Around-the-world:							
British.....	1	14,476	8,136	21,833	12,177	10,170.00	.....
Grand total, April, 1931.....	218	1,107,662	817,962	1,362,440	831,310	1,019,652.83	1,457,508
Grand total, April, 1930.....	249	1,252,812	939,146	1,563,708	954,028	1,171,453.01	1,650,663
Grand total, April, 1929.....	281	1,297,666	992,295	1,647,803	1,005,880	1,234,396.37	1,857,218

¹ Naval vessel of 3,297 displacement tons.

Cable address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

United States Intercoastal Traffic by Commodities for April, 1931.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for April, 1931, and the totals for April, 1930 and 1929. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Agricultural implements.....	1,019		1,019
Alfalfa.....		789	789
Alfalfa meal.....		1,574	1,574
Ammonia.....	144		144
Asbestos.....	29		29
Asphalt.....	84	140	224
Automobiles.....	5,296	196	5,492
Automobile accessories.....	3,033	77	3,110
Bamboo.....		119	119
Bark.....		243	243
Barley.....		50	50
Beans.....	106	4,456	4,562
Borax.....		538	538
Bran.....		834	834
Bricks.....	218		218
Burlap.....	249	223	472
Calcium carbide.....	197		197
Camphor.....		58	58
Canned:			
Fish.....	399	5,865	6,264
Fruit.....	944	11,879	15,823
Meat.....	260	43	303
Milk.....		127	127
Soup.....	1,148	122	1,270
Vegetables.....	281	4,588	4,869
Miscellaneous and unclassified.....	1,461	6,936	8,397
Carbon black.....	13	25	38
Celite filtercel.....		678	678
Cement.....	409		409
Charcoal.....	157	162	319
Chemicals.....	1,946	753	2,699
China and fire clay.....	77	194	271
Coal.....	1,433		1,433
Cocoa.....	136	18	154
Coconuts.....	60	590	650
Coffee.....	461	313	714
Coke.....	225		225
Cold storage:			
Cheese.....	12		12
Eggs.....	21	225	246
Fish.....	22		22
Lard.....	649		649
Other.....	297	309	507
Confectionery.....	783	6	789
Copra.....		32	32
Cork.....	102		102
Corn.....	18		18
Cotton.....	592	2,629	3,221
Cottonseed oilcake.....		1,200	1,200
Cottonseed meal.....		223	223
Cyanide.....	40		40
Drugs and medicines.....	1,089	104	1,193
Dyes.....	390		390
Earthenware.....	367	70	437
Eggs, dried.....		6	6
Explosives.....	219	123	342
Fertilizer.....	184	59	184
Flour.....	119	4,116	4,235
Fruit:			
Dried.....	47	9,885	9,932
Fresh.....	77	1,466	1,543
Fuller's earth.....	24	24	48
Furniture.....	1,274	15	1,289
General.....	39,094	8,519	47,613
Glass and glassware.....	3,640	121	3,760
Glue.....	66	291	357

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Granite.....	35		35
Gum.....		11	11
Hair.....	37	81	118
Hardwoods.....	122	50	172
Hay.....		2,100	2,100
Hemp.....	11	90	101
Honey.....		83	83
Hops.....		183	183
Horns and hoofs.....	5		5
Infusorial earth.....		386	386
Ink.....	46		46
Jute.....	41	104	145
Kapok.....		20	20
Lard substitute.....	971		971
Leather.....	55		55
Lime.....	15		15
Linoleum.....	608		608
Liquors.....	42	200	242
Lumber.....	1,885	117,445	119,330
Malt.....	193		193
Manufactured goods:			
Iron and steel.....	54,083	455	54,538
Machinery.....	3,510	544	4,054
Railroad material.....	5,215		5,215
Tinplate.....	10,197		10,197
Textiles.....	4,508	437	4,945
Miscellaneous.....	7,555	856	8,421
Marble.....	208		208
Matches.....	254	11	265
Metals:			
Copper.....	115	5,454	5,569
Iron.....	2,560		2,560
Lead.....	216	1,251	1,467
Scrap.....	692	975	1,667
Tin.....		168	168
Zinc.....	38	2,097	2,135
Other.....	35		35
Milk, powdered.....	19	959	978
Molasses.....	145		145
Musical instruments.....	13		13
Nitrates.....	1,170		1,170
Nuts.....		372	372
Oats.....	28		28
Oils:			
Cocunut.....		954	954
Cottonseed.....	395	240	635
Gas oil, fuel oil.....	60	28,454	28,514
Gasoline, benzine, naphtha.....		155,464	155,464
Kerosene.....		5,243	5,243
Lubricating and greases.....	4,672	1,440	6,112
Vegetable.....	762	263	1,025
Other.....		21	21
Ores:			
Copper.....	877	773	1,650
Magnesite.....		136	136
Paint.....	623	103	726
Paper.....	7,467	10,335	17,802
Paper pulp.....	57	6,447	6,504
Paper roofing.....	65		65
Peanuts.....	804	951	1,755
Peas.....		130	130
Phosphates.....	399		399
Porecelain.....	313	269	582
Quicksilver.....		3	3
Rags.....		332	332
Rice.....	626	202	828
Rope.....	103	13	116
Rosin.....	197		197
Rubber:			
Manufactured.....	984	103	1,087
Raw.....	55		55
Scrap.....	30		30
Salt.....	165		165
Seeds:			
Grass.....		50	50
Hemp.....		170	170
Other.....		235	235
Shells.....	1,559	3	1,562
Silk.....		2,031	2,031
Skins and hides.....		3,082	3,082
Slate.....	291		291
Soap.....	2,098	240	2,338
Soda.....	370		370
Soda ash.....	174		174
Soda, bicarbonate.....	89		89

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Soda, caustic.....	914	.....	914
Starch.....	61	.....	61
Sugar.....	18	11,558	11,576
Sulphur.....	10,366	.....	10,366
Syrup.....	101	.....	101
Talc.....	68	140	208
Tallow.....	.....	955	955
Tar.....	67	.....	67
Tea.....	.....	52	52
Tobacco.....	851	87	938
Toys.....	15	.....	15
Turpentine.....	242	.....	242
Vegetables.....	.....	149	149
Waste.....	21	195	216
Wax.....	169	66	235
Wheat.....	.....	108	108
Wine.....	.....	615	615
Wool.....	.....	4,075	4,075
Zinc oxide.....	106	.....	106
Total, April, 1931.....	199,662	444,023	643,685
Total, April, 1930.....	251,812	529,345	781,157
Total, April, 1929.....	297,271	541,129	838,400

Reporting Arrivals and Departures of Commercial Aircraft.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 9, 1931.

To all concerned—In the interest of safety, the flight of all commercial aircraft in the Canal Zone shall be reported promptly to the nearest Port Captain by the owner, operator, or other representative of the owner of the aircraft. The report shall be made by telephone immediately upon arrival or prior to the departure of the aircraft. For arriving aircraft, the time of arrival, point of departure, name of aircraft commander, and number of passengers shall be given. For departing aircraft, the time of departure, destination, name of aircraft commander, and number of passengers shall be given.

H. BURGESS,
Governor.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective May 1, 1931.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.24
Bronze, Tobin, average.....	Lb.	.28
Gasoline, motor grade.....	Gal.	.15
Metal, yellow.....	Lb.	.23
Oakum, Navy, spun.....	Lb.	.23
Oakum, Navy, unspun.....	Lb.	.13
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.33
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.45
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.39
Oil, kerosene, in drums.....	Gal.	.07
Oil, marine engine.....	Gal.	.49
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.11
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.11
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.13
Waste, cotton, white.....	Lb.	.16

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending May 9, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
West Ivis	McCormick S. S. Line		May 3		45
Grunewald	Hamburg-American Line		May 3		162½
President Jackson	Dollar Line	May 3	May 3	150	(²)
Vancouver	Hamburg-American Line	May 3	May 3	108	105
Irioma	United Fruit Co.	May 3	May 3	123	220
Lochkatrine	Royal Mail Steam Packet Co.	May 3	May 3	168	(²)
Esparta	United Fruit Co.	May 3	May 4	616	(²)
Venezuela	Panama Mail S. S. Co.	May 3	May 4	190	678
City of San Francisco	Panama Mail S. S. Co.	May 3	May 5	1,011	159
Carl Legien	Hamburg-American Line	May 4	May 4	52	66
Asia	Danish-East Asiatic Line	May 4	May 4	231	(²)
Cerigo	Hamburg-American Line	May 4	May 9	737	200
Lycia	Canadian Transport Co.	May 5	May 5	140	(²)
Pearl Marie	R. Feuillebois	May 5	May 5		37
Crijnsen	Royal Netherlands S. S. Co.	May 5	May 6	79	(²)
Baralt	Royal Netherlands S. S. Co.	May 5	May 6	612	63
Metapan	United Fruit Co.	May 5	May 6	51	625
Salvador	Pacific Steam Navigation Co.	May 6		296	
Rugia	Hamburg-American Line	May 6	May 7	46	11
Tela	United Fruit Co.	May 6	May 7	1,245	57
Nosa Chief	N. O. & S. A. S. S. Co.	May 6	May 7	273	222
Cristobal	Panama R. R. S. S. Line	May 6		3,051	
El Salvador	Panama Mail S. S. Co.	May 6	May 7	735	465
Sixola	United Fruit Co.	May 6	May 7	301	254
Caldas	National Navigation Co.		May 8		259
Aconecagua	Chilean S. S. Line	May 8	May 8	(¹)	6
Abraham Lincoln	Fred Olsen & Co.	May 8	May 8	(¹)	368
Calamares	United Fruit Co.	May 8	May 8	254	32
Martinique	Colombian S. S. Line	May 8	May 8	53½	442
Contessa	Standard Fruit & S. Co.	May 8	May 9	193	348
Crijnsen	Royal Netherlands S. S. Co.	May 8	May 9	14	661
Lobos	Pacific Steam Navigation Co.	May 8	May 9	22½	42
Pacific Grove	Furness, Withy & Co.	May 8	May 9	(¹)	145
Santa Elisa	Grace Line	May 8	May 9	149	317
Tillie Lykes	Lykes Brothers	May 9		993	
City of San Francisco	Panama Mail S. S. Co.	May 9		84	
Manizales	Roland S. S. Line	May 9		536	

¹ No cargo discharged.

² No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending May 9, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Tai Yang	Barber Wilhelmsen Line	April 24	April 24	307	
Santa Rita	Grace Line	April 25	April 25	120	4
Syra	Hamburg-American Line	April 25	April 25	157	
Saramacca	United Fruit Co.	April 26	April 27	307	
Takeotoy Maru	Nippon Yusen Kaisha	April 29	April 30	173	
Marit	Shell Oil Co.	April 30	May 2	7,866	
Invincible	Tampa Intercean S. S. Co.	April 30	May 1	283	
Pennsylvania	Panama-Pacific Line	May 1	May 1		200
Santa Barbara	Grace Line	May 1	May 1	10	5
Canca	National Navigation Co.	May 1	May 1		1
Cathwood	Union Oil Co.	May 1	May 2	11,090	44
Santa Inez	Grace Line	May 1	May 2	24	
Laurits Swenson	Fred Olsen & Co.	May 2	May 4	2,579	1
Wichita	Roosevelt S. S. Co.	May 2	May 2	102	
City of San Francisco	Panama Mail S. S. Co.	May 2	May 2	44	
Esparta	United Fruit Co.	May 3	May 3	175	
Lycia	Canadian Transport Co.	May 4	May 5	274	
Venezuela	Panama Mail S. S. Co.	May 4	May 5	20	1
El Salvador	Panama Mail S. S. Co.	May 5	May 6	88	
San Mateo	United Fruit Co.	May 6	May 7	600	20
Abraham Lincoln	Fred Olsen & Co.	May 8	May 8	1	

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

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OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., May 20, 1931. No. 42.

Cargo Through the Canal During April, 1931.

On pages 600 and 601 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in April, 1931. This cargo, segregated according to direction as compared with April, 1930, and the differences, are shown in the following tabulation:

	April, 1930.	April, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	806,119	553,609	-252,510
Pacific to Atlantic.....	1,650,663	1,457,508	-193,155
Total.....	2,456,782	2,011,117	-445,665

It will be noted from the above that the Atlantic to Pacific tonnage decreased 252,510 tons (31.3 per cent) in comparison with April, 1930, and that from the Pacific to Atlantic decreased 193,155 tons (11.7 per cent), making a total decrease of cargo tonnage in both directions of 445,665 tons (18.1 per cent).

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Seventy-one (71) per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 18.3 per cent in Europe, these two areas contributing over 89 per cent of the total cargo moving in this direction in April, 1931. In comparison with April, 1930, tonnage from the United States declined 134,247 tons (25.5 per cent), and that from Europe decreased 116,470 tons (53.5 per cent). The percentage of the total originating in the United States was considerably higher in the past month than in April, 1930, while the percentage of the total coming from Europe was lower in April, 1931.

Destination.—Forty-four and four-tenths (44.4) per cent of the Pacific-bound cargo tonnage was destined to the United States; 25.7 per cent to Asia; 11.4 per cent to South America; and 6.8 per cent to Australasia. Tonnage to all these areas decreased in comparison with April, 1930, as follows: To the United States, 76,237 tons, or 23.6 per cent; to Asia, 51,903 tons, or 26.7 per cent; to South America, 79,543 tons, or 55.7 per cent; and to Australasia, 59,003 tons, or 61.0 per cent. The proportion of the total cargo destined to the United States and Asia was higher in April, 1931, than in April, 1930, while that to South America and Australasia showed decided decreases in this feature. The heavy decrease in tonnage destined to South America was principally in cargo originating in Europe, which registered a decrease of 70 per cent under the Europe-to-South America tonnage in April, 1930. In the United States-to-South America trade a decrease of 43.2 per cent occurred. The heavy loss in cargo tonnage

to Australasia was evenly distributed, there occurring a 57.4 per cent decrease in tonnage originating in Europe in comparison with April, 1930, and a 56 per cent decrease in that coming from the United States.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 46.1 per cent came from the United States; 21.5 per cent from South America; 12.9 per cent from Canada; 9.6 per cent from Asia; and 6.7 per cent from Australasia. Cargo from Asia (including the Philippine Islands) showed a proportionate as well as actual increase in tonnage in comparison with April, 1930, the actual increase amounting to 64,050 tons, or 84.6 per cent. This was due principally to exceptionally heavy sugar shipments from the Philippine Islands last month, consigned mostly to the United States. Cargo tonnage from the other before-mentioned areas decreased in actual tonnage as follows: From the United States, 131,898 tons, or 16.4 per cent; from South America, 66,052 tons, or 17.4 per cent; from Canada, 25,558 tons, or 12.0 per cent; and from Australasia, 55,147 tons, or 36.0 per cent. In relation to the total cargo tonnage, the amounts coming from the United States, South America, and Australasia, showed small decreases, while that from Canada was approximately the same as in April, 1930.

Destination.—Segregated according to destination, 55.4 per cent of the cargo tonnage moving from the Pacific to the Atlantic went to the United States, and 36.9 per cent to Europe. Tonnage to the United States decreased 142,184 tons, or 15.0 per cent, in comparison with April, 1930, and that to Europe declined 28,178 tons, or 5.0 per cent. In their proportions to the total cargo, the tonnage to the United States was slightly lower and to Europe higher in April, 1931, than in April, 1930.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify approximately 87 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific during the month of April, 1931. The remaining 13 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for April, 1930, or April, 1931, are listed in the following tabulation, showing differences:

Commodity.	April, 1930.	April, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia.....	16,996	8,278	-8,718
Automobiles.....	15,374	7,769	-7,605
Cement.....	35,539	12,131	-23,408
Coal and coke.....	22,929	7,476	-15,453
Cotton.....	19,590	32,976	+13,386
Manufactured goods:			
Iron and steel.....	170,008	100,760	-69,248
Machinery.....	17,797	9,298	-8,499
Railroad material.....	19,055	9,230	-9,825
Textiles.....	11,078	6,638	-4,440
Tinplate.....	28,362	21,783	-6,579
Miscellaneous.....	12,782	10,929	-1,853
Metal, scrap.....	15,021	692	-14,329
Oils, mineral.....	48,290	41,204	-7,086
Paper.....	22,891	16,987	-5,904
Phosphates.....	40,557	41,291	+734
Silversand.....	12,517	.....	-12,517
Slag.....	11,735	3,845	-7,890
Sugar.....	17,969	13,045	-4,924
Sulphur.....	30,982	10,381	-20,601

The above 19 commodity groups for April, 1931, comprise 64.1 per cent of the total cargo moving from the Atlantic to the Pacific. Except for a substantial increase in the movement of cotton, and a slight increase in the shipments of phosphates, the above listed commodities all showed decreases in comparison with April, 1930.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

From the cargo declarations submitted it was possible to classify approximately 98 per cent of the cargo moving from the Pacific to the Atlantic during April, 1931. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1930, are listed below:

Commodity.	April, 1930.	April, 1931.	Difference.
	Long tons.	Long tons.	Long tons.
Barley.....	13,035	19,430	+6,395
Beans.....	7,691	14,473	+6,782
Canned goods (fish, fruit, vegetables, etc.).....	45,737	47,755	+2,018
Coffee.....	19,581	14,603	-4,978
Cold storage (food products).....	36,608	42,372	+5,764
Copra.....	14,414	15,013	+599
Flour.....	10,007	12,384	+2,377
Fruit, dried.....	8,805	18,534	+9,729
Fruit, fresh.....	8,294	21,323	+13,029
Lumber.....	305,523	194,422	-111,101
Metals, various.....	54,068	51,904	-2,164
Molasses.....	2,335	14,291	+11,956
Nitrates.....	71,063	80,729	+9,666
Oils, mineral.....	420,252	367,931	-52,321
Oil, whale.....	47,330	19,000	-28,330
Ores, principally iron.....	210,475	96,857	-113,618
Paper.....	8,762	12,078	+3,316
Sugar.....	72,325	144,589	+72,264
Wheat.....	166,242	123,126	-43,116
Wool.....	17,062	17,408	+346

* Does not include fresh fruit.

The above 20 commodity groups for April, 1931, comprise 91.1 per cent of the cargo moving from the Pacific to the Atlantic. Thirteen of the items show increases and 7 decreases. Heavy decreases occurred particularly in the shipments of lumber, ores, and mineral oils, more than offsetting the small increases made in the shipments of other commodities. The most important increase was made in the shipments of sugar, the majority of which went to the United States from the Philippine Islands.

(Continued on next page.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending May 16, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Democracy.....	Nelson Line.....	May 7.....	May 9.....	938	102
Santa Elisa.....	Grace Line.....	May 9.....	May 9.....	243	66
Sutherland.....	Nelson Line.....	May 10.....	May 11.....	196	.....
Nitro.....	U. S. Government.....	May 10.....	May 12.....	1	23
St. Mibiel.....	U. S. Government.....	May 11.....	May 12.....	203	26
City of San Francisco.	Panama Mail S. S. Co.	May 11.....	May 11.....	.....	1
Santa Maria.....	Grace Line.....	May 11.....	May 11.....	27	1
Kenowis.....	U. S. Government.....	May 12.....	May 13.....	238	8
Suriname.....	United Fruit Co.....	May 13.....	May 14.....	164	138
Nora.....	Union Oil Co.....	May 13.....	May 14.....	13,558	.....
Bennekom.....	Royal Netherlands S. S. Co.	May 13.....	May 13.....	85	.....
Santa Clara.....	Grace Line.....	May 14.....	May 14.....	77	.....
Nore.....	Anglo-Saxon Petroleum Co.	May 15.....	May 16.....	1,331	.....
California.....	Panama-Pacific Line.....	May 15.....	May 15.....	.....	189
President Van Buren.	Dollar Line.....	May 15.....	May 15.....	2	1
Santa Teresa.....	Grace Line.....	May 15.....	May 16.....	2	.....

Origin and Destination of Cargo Passing Through the Panama Canal from the Atlantic to the Pacific, April, 1931.—Continued from page 599.
(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.						SOUTH AMERICA.						AUSTRALASIA.						ASIA.						Grand total.	Per cent of total cargo.
	West coast of United States.	West coast of Canada.	West coast of Central America.	Balboa, C. Z. ¹	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Perador.	Pern.	West coast of South America. ¹	Total, South America.	Australia.	New Zealand.	Australasia. ¹	Total, Australasia.	Philippine Islands.	China.	Japan.	Par East. ¹	Total, Asia.					
NORTH AMERICA:																										
UNITED STATES—																										
North Atlantic ports.....	156,251	729	950	432,16,365	174,727	13,357	761	425	3,339	687	11,569	7,117	1,649	8,766	11,439	16,143	28,425	5,578	61,585	263,647	47	6				
South Atlantic ports.....	4,897	31		600	5,528										420	746	2,215	10	3,391	8,919						
Gulf ports.....	38,514	360		212	65	39,151	2,503	230	65	714		3,512	2,513	2,513	49	3,126	72,290		73,465	120,641	21	8				
Total, United States.....	199,662	1,120	950	1,244	16,430	219,106	15,860	991	490	4,053	687	22,081	9,630	1,649	11,279	11,908	20,015	102,930	5,588	140,441	393,207	71	0			
EAST COAST OF CENTRAL AMERICA—																										
East coast of Canada.....	2,201					2,201							3,028													
East coast of Central America.....	500		2,174			2,674	0,100					6,100														
Cristobal, C. Z. ²	3,460		3,352			6,812	1,586	1,173	842	298	500	3,349														
West Indies.....	5,307	6,054	90	9,183		20,664	3,868					3,808														
Total, North America.....	208,929	9,375	6,536	10,427	16,430	251,697	27,454	2,161	3,324	351	1,187	36,488	12,658	1,649	14,307	11,908	20,015	102,930	5,588	140,441	442,933	80	0			
EUROPE:																										
British Isles.....	3,594	6,332				9,926	3,273	44	1,265	1,657	1,271	7,450														
Belgium.....	13,047	1,903	2,016	41	1,237	18,304	2,268	42	787	596		3,693														
Denmark.....	2																									
France.....	918	7	80			1,005	656		16	58		730														
Germany.....	3,421	427	102		5,437	9,407	2,928	188	336	1,438	18	4,908														
Holland.....	1,509	100		69		1,678	1,293	143	59	761		2,256														
Italy.....	593	44				637	1,022			353		1,375														
Norway and Sweden.....	2,305			11	1,995	4,311							507	21												
Spain and Portugal.....	4,542		36	1,397		5,975	2,004	548	626	354	2,557	6,089														
Europe.....	29,929	8,911	3,606	3,105	6,694	51,243	13,600	953	3,029	5,280	3,846	26,670	1,099	17,740	4,226	23,265										
Total, Europe.....	7,327	162				7,489																				
East coast of South America.....	246,185	18,448	10,142	532	23,124	310,431	41,054	3,129	4,361	9,581	5,033	158,133	757	19,389	4,426	37,572	11,908	20,015	104,937	5,588	142,448	553,009	100			
Grand total.....	444	33	20	22	42	561	74	0.6	0.8	1.7	0.9	11.4	2.5	3.5	0.8	6.8	2.1	3.6	18.9	1.1	25.7	100.0				
Per cent of total cargo:	40.0	2.6	1.6	0.2	1.8	46.2	10.2	0.2	0.3	2.3	4.7	17.7	2.3	8.2	1.5	12.0	2.1	5.9	13.2	2.9	24.1	100.0				
April, 1931.....	42.6	1.7	3.0	0.0	1.9	49.2	4.9	2.2	0.4	2.4	6.9	16.8	3.9	10.0	0.4	14.3	2.9	4.6	10.4	1.8	19.7	100.0				
April, 1930.....																										
April, 1929.....																										

¹ General cargo not routed so as to allow segregation between definite ports. ² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, April, 1931.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										EUROPE.										Grand total.	Per cent of total cargo.					
	UNITED STATES.					CENTRAL AMERICA.					Total, North America.	West Indies.	Cristobal, C. Z. *	Total, North America.	France.	Germany.	Ireland.	Italy.	Norway and Sweden.	Spain and Portugal.			Europe. †	Total, Europe.	East coast of South America.	India.	Africa.
	North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total, United States.	East coast of Canada.	East coast of Central America.	Cristobal, C. Z. *	West Indies.	Total, North America.																		
NORTH AMERICA:																											
West coast U. S.	398,833	3,668,411	472,444	623	372,117	5,601,429	276,106,384	583,430,415	513,875	8,240,128	12,871	240	31,511,194	810,394	2,144	671,194	46.1										
West coast Canada	13,043	487	13,530	12,196	12	2,418	28,156	64,967	1,154	1,862	18,224	8,363	9,823	344	7,470	188,037	12.9										
W. coast Cen. America . . .	304	304	304	304	5,906	6,210	1,225	1,069	45	359	9,508	0.7	3,298	640	9,508	0.7											
Bahama, C. Z.	403	403	403	403	24,227	24,227	12,600	12,600	403	36,827	2.5	36,827	2.5	905,069	62.2												
Hawaiian Islands	15,745	8,482	24,227	12,196	372,117	5,601,429	276,106,384	583,430,415	513,875	8,240,128	12,871	240	31,511,194	810,394	2,144	671,194	46.1										
Total, N. America.	427,975	3,668,504	844,482	12,196	372,117	5,601,429	276,106,384	583,430,415	513,875	8,240,128	12,871	240	31,511,194	810,394	2,144	671,194	46.1										
SOUTH AMERICA:																											
Chile	114,278	24,278	15,368	153,924	332	963,155	194	6,576	1,877	221	4,850	3,552	1,721	1,780	1,620	202,698	13.9										
Colombia	4,069	140	4,209	2,176	2,176	9	6,394	60	60	60	60	60	60	60	60	6,454	0.4										
Ecuador	8,620	8,620	8,620	2,216	10,836	100	105	69	692	377	440	327	25	50	473	13,463	0.6										
Peru	2,906	2,906	19,617	60	11,525	594	9,484	278	2,248	7,691	9,892	236	34	6,748	133	89,708	6.2										
W. coast South Amer.	114	3	117	171	171	288	4	4	4	4	4	4	4	4	959	1,240	0.1										
Total, S. America.	129,987	24,278	15,511	169,776	4,955	958,225	306	16,164	5,260	5,383	13,681	2,397	2,141	8,393	1,650	23,267	313,000	21.5									
AUSTRALASIA:																											
Australia	9,018	934	9,952	10,514	562	10,514	3,781	3,781	3,781	3,781	3,781	3,781	3,781	3,781	3,781	14,295	1.0										
New Zealand	1,178	182	1,360	1,065	1,065	59,824	19,000	19,000	19,000	42	1,310	42	1,310	1,243	62,419	64,844	4.4										
Australasia	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	1.3										
Total, Australasia	29,196	1,116	31,939	63,605	42	1,310	42	1,310	1,243	65,200	98,139	6.7	313,000	21.5													
ASIA:																											
Philippine Islands	100,211	8,971	109,182	109,182	68	8,336	8,336	8,336	8,336	8,336	8,336	8,336	8,336	8,336	8,336	109,182	7.5										
China	8,273	8,273	8,273	8,273	8,273	8,273	8,273	8,273	8,273	8,273	8,273	8,273	8,273	8,273	8,273	8,273	8,273	0.6									
Japan	7,478	7,478	7,478	7,478	7,478	7,478	7,478	7,478	7,478	7,478	7,478	7,478	7,478	7,478	7,478	7,478	7,478	0.5									
Far East	1,010	405	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1.0									
Total, Asia.	116,972	9,376	126,348	126,348	91	126,442	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	9.6									
Grand total.	704,130	97,946	731,807	807,629	372,224	184,176,667	912,959	209,170	6,997	8,704	49,197	44,938	21,815	3,772	222,936	102,557	537,231	5,152	2,144	22,147	457,508	100.0					
Per cent of total cargo:																											
April, 1931	48.3	1.9	5.2	55.4	4.3	1.7	1.2	62.6	18.5	0.5	0.6	3.3	3.1	1.5	0.3	1.5	0.6	7.0	36.9	0.4	0.1	100.0	0.				
April, 1930	56.4	2.7	4.5	57.6	4.3	0.2	1.1	64.4	16.5	1.0	0.1	1.3	1.7	0.7	0.2	1.9	1.1	9.8	34.3	0.7	0.5	100.0	0.				
April, 1929	49.7	2.4	3.8	51.9	3.9	0.2	1.1	62.1	15.4	2.2	1.1	2.6	2.7	0.4	0.8	0.7	9.3	37.8	0.1	0.1	100.0	0.					

* General cargo not routed so as to allow segregation between definite ports. † Includes both local and transit cargo.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, May 16, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
El Cervo	9	23 45	10	6 15	10	13 35	10	15 00	British	Anglo-Leeward Oil Co.	407 11	52 2	20 0	Philadelphia, Pa.	Lo Libertad, Ecun.	Ballast.	6 046	4 326	
Kentuckian	10	1 10	10	6 15	10	13 56	10	15 02	American	Amer-Hawainian Line.	414 5	55 7	12 9	Boston, Mass.	Portland, Oreg.	General.	3 432	7 049	
Calgarohie	10	1 30	10	7 15	10	14 24	10	15 51	British	Imperial Oil Co.	321 5	70 4	25 9	Montreal, Canada	Talara, Peru	Ballast.	12 330	4 941	
Tongking	10	6 55	10	7 30	10	14 48	10	16 27	Danish	East Asiatic Co.	410 0	55 2	13 0	Nassau, Denmark	Los Angeles, Calif.	Ballast.	7 013	5 317	
Ionic	9	22 15	10	14 15	10	22 12	10	23 30	British	J. R. Powell.	500 3	65 3	29 6	Auckland, N. Z.	Auckland, N. Z.	General.	4 612	12 872	
Omah	10	16 45	10	16 29	10	16 29	10	16 29	American	Shaw, Savill & Albion.	425 0	54 0	22 0	Cristobal, C. Z.	Gatun, C. Z.	General.	6 162	9 577	
Yaya Maru	10	16 45	10	17 35	11	11 31	11	12 50	Japanese	Kokusai Kisen Kaisha.	445 0	54 0	22 0	Boston, Mass.	Nagoya, Japan	General.	8 002	6 798	
Solana	10	18 35	10	19 05	11	12 46	11	13 40	American	DeWaters Oil Co.	419 5	56 5	23 0	New York, N. Y.	San Francisco, Cal.	Lubricating oil.	1 600	7 080	
City of San Francisco	9	17 00	11	6 20	11	13 28	11	15 35	American	Panama Mail S. S. Co.	296 0	45 0	16 0	Pto. Colombia, Col.	San Francisco, Cal.	General, coffee.	240	3 848	
Brandanor	10	23 10	11	6 20	11	14 08	11	17 50	Norwegian	Interocean S. S. Corp.	381 6	53 6	12 5	Swains, England	Vancouver, B. C.	Ballast.	0 280	4 792	
Blithmoor	11	6 05	11	7 25	11	15 11	11	16 35	British	De Buisson	420 0	54 0	22 10	St. Kitts, B. W. I.	Vancouver, B. C.	Sugar.	6 003	6 863	
Mitelmeyer	10	18 45	11	8 35	11	15 42	11	16 37	German	Anglo-Saxon Pet. Co.	412 0	55 0	19 11	Sewaren, N. J.	Los Angeles, Calif.	Ballast.	6 065	4 840	
Delight	11	9 20	11	9 30	11	16 36	11	17 35	American	Gulf Pac. Redwood Line	379 9	53 1	21 0	Houston, Tex.	Bellingham, Wash.	Steel, etc.	3 555	3 067	
Gracia	11	9 30	11	9 45	11	17 16	11	18 34	British	Donaldson Brothers.	415 6	55 0	17 0	Glasgow, Scotland	Vancouver, B. C.	General.	1 268	6 309	
San Pedro	11	10 50	11	10 01	11	18 05	11	19 15	American	Dimon S. S. Corp.	395 0	55 0	17 0	Philadelphia, Pa.	Seattle, Wash.	General.	3 348	7 350	
Odenwald	10	17 10	11	12 05	11	18 53	11	19 55	German	Hamburg-American Line	399 0	54 0	18 9	Hamburg, Germany	Valparaiso, Chile	Cement, iron, gen.	1 870	6 308	
Heffron	11	14 25	11	14 30	11	22 05	11	23 20	American	Argonaut S. S. Co.	410 0	56 0	23 0	Baltimore, Md.	Seattle, Wash.	Steel, general.	6 023	8 312	
Baldall	11	15 45	11	17 23	12	9 27	12	10 33	American	Shell Eastern Pet. Prod.	416 9	56 0	16 0	New York, N. Y.	Los Angeles, Calif.	Ballast.	377	6 721	
Grant	10	21 30	12	6 05	12	12 53	12	13 50	American	U. S. Army	490 0	55 4	26 10	Brooklyn, N. Y.	San Francisco, Cal.	General.	3 806	12 945	
Huntingdon	11	23 25	12	6 05	12	14 30	12	15 35	British	Federal Steam Nav. Co.	520 4	64 2	22 6	Liverpool, England	Pt. Adems, N. Z.	General.	2 331	7 601	
Tismarek	12	7 05	12	7 25	12	15 17	12	16 20	Swedish	Transatlantic S. S. Co.	436 0	56 2	19 0	Gave, Sweden	Seattle, Wash.	General.	3 655	5 699	
Kenovis	12	10 45	12	10 50	12	18 23	12	21 34	American	Nelson Line.	386 0	52 2	18 3	New York, N. Y.	Seattle, Wash.	General.	1 364	6 663	
Tamaha	9	21 55	12	11 28	12	18 54	13	17 25	American	U. S. Army	390 0	54 2	18 4	Brooklyn, N. Y.	San Francisco, Cal.	Army supplies.	1 364	6 633	
Callifornia	12	11 10	12	12 15	12	19 31	12	20 46	British	Standard Oil Co.	430 0	54 4	17 0	Providence, R. I.	Los Angeles, Calif.	Ballast.	3 030	8 567	
J. L. Luckenboch	12	11 35	12	13 25	12	20 38	12	21 34	American	Amer-Hawainian Line.	445 0	59 8	20 0	Boston, Mass.	Seattle, Wash.	General.	3 030	8 567	
Fernbank	12	14 40	12	15 15	12	22 18	12	24 00	American	Luckenboch Line.	448 9	60 2	21 6	Boston, Mass.	Tacoma, Wash.	General.	3 230	9 294	
Bennet	12	22 40	13	6 20	13	13 23	13	14 30	Norwegian	Royal Nedh. S. S. Co.	382 7	53 4	25 6	Tampa, Fla.	Shanghai, China.	Phosphate, cotton	7 048	6 112	
Paris City	13	6 15	13	7 25	13	15 01	13	16 30	Dutch	Fern Line	419 7	58 0	16 0	Hamburg, Germany	Corral, Chile	General.	1 510	7 849	
Salvador	13	8 02	13	8 40	13	16 00	13	17 10	British	Mitchell Grain Co.	412 0	55 0	16 0	St. Shields, Eng.	Vancouver, B. C.	Ballast.	6 673	4 764	
Sjornborg	13	16 10	13	8 45	13	16 58	13	18 10	British	Pacific Steam Nav. Co.	215 0	33 5	15 6	Cristobal, C. Z.	Champerico, Guat.	General.	555	1 270	
Pertusa	13	16 10	13	16 15	13	22 48	13	23 50	Danish	Hanbury Timber Prods	389 0	54 0	13 0	New York, N. Y.	Puget Sound, Wash.	Ballast.	6 219	4 691	
Vindland	13	18 20	13	18 45	14	9 33	14	10 44	American	Calmar Line	409 8	54 2	21 0	Baltimore, Md.	Seattle, Wash.	General.	4 507	6 581	
Ethan Allen	14	7 15	14	9 45	14	16 14	14	17 15	Norwegian	Scand. Golf Pacific Line.	383 0	54 0	19 0	Oslo, Norway	Corral, Chile	General.	4 115	5 413	
Santa Clara	14	4 30	14	12 15	14	18 53	15	1 24	American	Amer. Gulf Orient Line.	439 0	60 2	25 10	New Orleans, La.	Davao, P. I.	Case oil, general.	8 431	8 978	
Mascock	14	17 30	14	18 50	15	9 35	16	3 55	American	Nelson Line.	324 0	46 2	22 0	New York, N. Y.	Talcahuano, Chile.	General.	1 446	11 680	
Tanker.																			

1 Tanker. 2 Motor ship. 3 Launch. 4 Transport.

14	23	40	15	6.15	15	13.45	15	14.55	American	Luckenbach Line	434.3	58.0	23.0	New Orleans, La.	Seattle, Wash	5,900	7,977	5,764
15	1	05	15	6.20	15	14.03	15	14.55	British	Reardon Smith Line	411.0	55.0	13.0	Boston, Mass	Vancouver, B. C.	5,000	7,088	5,166
15	3	05	15	7.10	15	14.22	15	21.45	American	Dollar Line	502.0	62.2	27.0	New York, N. Y.	San Francisco, Cal.	3,771	12,023	8,495
15	5	55	15	7.20	15	14.59	16	00.10	American	Panama-Pacific Line	574.4	80.3	26.8	New York, N. Y.	San Francisco, Cal.	2,559	24,506	17,865
15	1	10	15	8.40	15	15.18	16	35	Norwegian	Fearnley & Eger	382.7	52.0	15.0	Baltimore, Md	Vancouver, B. C.	6,112	4,284	6,940
15	14	25	15	10.05	15	17.08	15	18.01	American	McCormick S. S. Co.	410.5	40.0	17.6	Buenos Aires, Arg	Los Angeles, Calif	2,185	6,624	5,040
15	10	05	15	10.10	15	17.28	15	23.48	British	Com'ith & Dom. Line	477.0	63.1	27.8	Hull, England	Dunedin, N. Z.	8,240	10,720	7,692
14	14	10	15	11.15	15	18.35	15	22.20	German	Hamburg-American Line	461.5	61.0	19.2	Hamburg, Germany	Vancouver, B. C.	2,564	9,267	6,834
14	6	15	15	12.05	15	19.45	15	20.55	American	Ore S. S. Corp.	549.0	72.0	23.0	Baltimore, Md	Cruz Grande, Chile	14,325	4,887	14,325
14	4	55	15	13.32	15	20.30	15	21.45	American	Quaker S. S. Line	408.5	40.4	19.0	Philadelphia, Pa.	Portland, Ore	2,980	6,755	4,887
14	15	10	15	14.35	15	21.15	15	22.57	American	United Fruit Co.	337.0	41.9	17.9	Cristobal, C. Z.	San Francisco, Cal.	3,687	2,320	3,687
16	5	05	16	16.20	16	13.46	16	17.15	Norwegian	Anglo-Saxon P&T Co	276.0	40.0	19.0	Tampico, Mexico	Valparaiso, Chile	2,200	2,492	1,676
16	12	05	16	13.00	16	19.35	16	20.30	American	Amer.-Hawaiian Line	407.7	53.7	17.0	Boston, Mass	Portland, Ore	3,220	7,076	3,028
16	16	15	16	14.25	16	21.07	16	23.53	Japanese	Kokusan Kisen Kaisha	483.0	58.0	25.0	New York, N. Y.	Yokohama, Japan	8,213	8,230	9,908
16	16	40	16	16.55	17	9.04	17	10.15	American	Williams S. S. Line	390.0	54.2	21.6	Baltimore, Md	Seattle, Wash	3,895	6,162	4,433

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

10	00	05	10	6.19	10	13.30	10	15.35	British	Reardon Smith Line	400.0	54.2	26.0	Honolulu, T. H.	Manchester, Eng.	7,800	6,064	5,389
10	00	30	10	6.53	10	14.15	10	16.00	Norwegian	Scand. South Pac. Line	390.8	54.7	26.0	Corral, Chile	Stockholm, Sweden	6,924	6,822	5,001
10	3	00	10	7.15	10	14.50	10	14.50	American	Capt. Joseph Martin	34.6	8.3		Balboa, C. Z.	Gatun Lake, C. Z.			4
10	6	40	10	8.12	10	15.35	10	15.35	American	Luckenbach Line	434.3	57.7	23.0	Los Angeles, Calif	Mobile, Ala	4,217	7,982	5,922
10	5	30	10	8.44	10	17.35	10	17.35	Norwegian	Swayne & Hoyt	324.0	46.2	20.0	Portland, Ore	New Orleans, La.	2,615	3,984	2,612
10	8	25	10	9.25	10	16.35	10	16.35	American	Canadian Transport Co.	381.8	52.2	25.0	Olympia, Wash.	Belfast, Ireland	5,576	5,673	3,592
11	2	30	11	6.27	11	14.05	11	14.05	American	Panama Mail S. S. Co.	261.1	40.0	15.0	Acujata, Salvador	Cristobal, C. Z.	881	2,352	1,519
11	1	30	11	6.51	11	15.10	11	15.10	American	Standard Transp. Co.	480.5	66.0	29.0	Los Angeles, Calif	New York, N. Y.	13,089	9,779	6,712
11	3	00	11	7.23	11	15.50	11	15.50	American	Hegira S. S. Co.	404.6	56.0	27.0	Everett, Wash.	Newark, N. J.	10,089	8,353	6,113
11	4	45	11	8.27	11	16.25	11	16.25	Norwegian	Argonaut S. S. Co.	404.6	55.9	28.0	Port Allen, T. H.	New York, N. Y.	7,834	6,745	5,567
11	7	15	11	11.36	11	18.45	11	18.45	American	Anglo-Saxon P&T Co.	473.6	64.3	29.0	San Francisco, Cal.	Caracas, D. W. I.	13,089	9,592	6,775
11	8	10	11	12.10	11	19.25	12	00.45	American	Nelson S. S. Co.	380.0	53.2	25.0	San Francisco, Cal.	Baltimore, Md	4,469	5,654	4,123
11	14	45	11	18.42	11	21.10	12	00.45	American	Grace Line	466.0	64.0	23.0	Talcahuano, Chile	New York, N. Y.	4,251	10,626	6,680
11	11	45	12	6.30	12	14.15	12	15.05	British	Can. Nat. Steamships	430.0	56.2	19.3	Sydney, N. S. W.	Montreal, Canada	1,800	7,680	5,494
11	20	00	12	6.17	12	15.30	12	15.30	American	Panama-Pacific Line	586.4	80.3	27.0	San Francisco, Cal.	New York, N. Y.	3,566	25,254	18,170
11	22	05	12	7.12	12	17.10	12	21.15	British	Standard Oil Co.	416.9	56.2	24.0	San Francisco, Cal.	New York, N. Y.	6,798	4,775	6,798
11	22	20	12	8.11	12	17.50	12	22.05	German	T. & J. Harrison	410.0	52.3	24.0	N. West ster, B. C.	Liverpool, England	6,990	6,262	4,154
11	22	20	12	8.11	12	17.50	12	22.05	German	North German Lloyd	520.8	63.6	26.0	Vancouver, B. C.	Antwerp, Belgium	10,900	11,007	7,058
11	22	20	12	8.40	12	18.40	12	18.40	American	Luckenbach Line	446.0	56.1	28.0	Portland, Ore	Boston, Mass	6,735	5,562	6,236
12	2	40	12	9.14	12	19.15	12	21.25	American	N. O. & S. A. S. S. Co.	324.0	46.2	23.0	San Antonio, Chile	New Orleans, La.	4,407	3,985	2,570
12	3	45	12	9.45	12	19.40	12	19.40	American	Amer.-Hawaiian Line	415.0	53.7	25.0	Portland, Ore	Boston, Mass	5,667	7,380	5,359
12	4	30	12	10.39	12	20.45	12	23.45	British	Can. Nat. Steamships	400.5	52.4	23.0	Vancouver, B. C.	Montreal, Canada	6,034	5,891	4,186
12	11	10	12	11.19	12	21.10	13	11.00	American	U. S. Navy	483.1	60.1	22.3	San Diego, Calif.	Honolulu, H. I.	609		
12	11	10	12	12.12	12	21.35	12	21.35	American	Calmar Line	409.8	54.7	25.0	Seattle, Wash	Baltimore, Md	7,450	6,581	4,795
12	11	55	12	13.02	12	22.00	12	22.00	American	Williams S. S. Corp.	386.8	52.2	25.0	Seattle, Wash	Baltimore, Md	7,110	5,680	4,080
11	15	10	12	14.47	12	23.15	13	13.05	American	U. S. Army	448.0	58.0	22.0	San Francisco, Cal.	Brooklyn, N. Y.			185

7 Nitrates, beans, and coffee.

8 Launch.

9 Motor ship.

10 Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Tons.	Net.			
West Notes.	12	14	00	12	23	05	13	6	10	American.	410	5	54	3	22	5	Lumber, general.	4,096	6,582	5,014
Teno.	12	20	30	13	13	40	13	15	50	Chilian.	421	8	56	0	94	0	General.	2,901	7,764	4,672
Lehigh.	12	21	37	13	13	40	13	23	20	British.	485	6	62	3	30	0	General.	9,760	10,803	7,606
Rhein.	13	6	00	13	15	10	13	20	20	German.	433	6	58	1	24	0	General.	8,603	8,071	5,952
Erlangen.	13	6	10	13	15	15	14	2	00	German.	470	1	57	1	26	0	General.	7,439	7,750	5,282
Kwanai Maru.	13	12	50	13	14	07	13	20	45	Japanese.	461	0	61	5	0	0	General.	4,459	9,414	4,790
Silvercreek.	13	13	37	13	15	30	13	23	20	American.	333	8	48	2	0	0	Lumber.	5,000	4,128	2,741
Rangtane.	13	11	15	14	13	58	14	13	58	British.	531	0	70	2	57	0	Frozen, general.	5,332	18,205	13,494
Sprintane.	13	13	36	14	6	45	14	13	35	American.	336	7	41	9	20	0	General.	1,116	3,067	2,329
Lugeton.	14	00	20	14	7	07	14	15	40	American.	482	5	60	2	27	0	Gasoline.	11,500	8,491	6,065
Lugeton.	14	1	06	14	8	00	14	16	15	Danish.	385	6	54	2	26	0	Lumber.	7,196	7,736	3,064
Gaidborg.	14	7	40	14	8	31	14	17	30	Italian.	523	1	64	0	29	0	General.	9,323	13,787	9,856
California.	14	00	30	14	17	30	14	17	30	American.	409	7	54	2	25	0	Lumber, general.	7,894	6,630	4,916
Pacific Hen-	14	1	30	14	9	55	14	18	20	French.	417	8	55	9	27	0	General.	8,440	7,157	4,936
lock.	14	4	00	14	10	07	14	18	30	British.	411	7	54	6	28	0	Wheat.	8,959	9,957	5,133
Indiana.	14	8	00	14	10	32	14	19	25	British.	420	5	54	2	27	0	Liverpool, England.	8,013	7,139	4,640
Welsh City.	14	10	45	14	11	16	14	20	00	Japanese.	407	2	50	8	21	0	General.	2,285	6,533	4,772
Laguna.	14	10	45	14	11	16	14	20	00	American.	409	5	52	2	35	0	Lumber, general.	7,380	6,566	4,960
Hague Maru.	14	11	45	14	12	43	14	20	24	American.	409	5	72	2	35	0	Iron ore.	21,652	15,351	4,297
West Cape.	14	2	30	14	16	04	15	05	15	American.	434	3	57	5	25	0	Lumber, general.	7,729	7,953	5,912
Marore.	14	2	30	14	16	04	15	05	15	American.	434	3	56	2	27	0	Gasoline.	9,585	7,394	5,099
Georgan.	14	23	00	15	6	25	15	15	50	American.	434	8	56	2	27	0	Wheat, general.	7,558	6,858	5,308
Hugenot.	15	6	20	15	7	16	15	17	10	American.	388	1	8	3	0	0	Ballast.	8,136	7,643	5,720
Taragor.	15	14	40	15	15	31	15	9	00	Norwegian.	346	8	8	3	0	0	General.	3,682	5,726	4,056
Afon.	15	18	00	15	19	14	16	11	25	American.	415	1	55	7	28	0	General.	8,823	8,297	5,572
San Lucas.	15	15	10	16	6	18	16	13	00	Norwegian.	369	2	51	9	24	0	General.	7,705	7,834	6,018
Santa Teresa.	15	15	10	16	6	32	16	13	55	British.	400	9	58	2	25	0	General.	5,962	5,870	3,979
Nore.	15	6	15	16	6	32	16	15	17	Dutch.	400	9	53	4	25	2	Soya beans.	1,087	1,682	1,041
Bodegraven.	16	00	05	16	7	50	16	16	20	Swedish.	343	6	62	4	15	0	General.	10,098	8,771	6,292
Laponia.	16	00	16	16	7	10	16	15	15	British.	400	9	62	4	15	0	General.	8,198	5,729	4,102
Durazzo.	16	2	00	16	8	30	16	17	30	Belgian.	462	2	90	7	27	3	Wheat, oats.	7,423	10,332	7,475
Mercer.	16	23	00	16	8	45	16	18	00	Belgian.	409	6	61	2	25	5	General.	7,423	10,332	7,475
Brighton.	16	17	45	16	18	25	16	19	30	British.	409	6	61	2	25	5	General.	7,423	10,332	7,475
Washington.	16	17	45	16	18	25	16	19	30	French.	409	6	61	2	25	5	General.	7,423	10,332	7,475

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

* Launch.

* Motor ship.

* Tanker.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 2	Ashville ¹⁰	U. S. Navy.	Nicaragua.	May 10	No. 670-M ¹¹	Pan American Airways.	Miami via wayports.
May 10	Tela.	United Fruit Co.	Port Limon, Costa Rica.	May 10	Tela.	United Fruit Co.	New Orleans, La.
May 10	No. 9670 ¹¹	Pan American Airways	San Salvador and waypts.	May 10	Cristobal.	Panama R. S. S. Line	New York via Haiti.
May 11	La Emperatriz ¹²	George Rivers.	Bluefields, Nicaragua.	May 10	Trille Lykes	Lykes Brothers S. S. Co.	Sia, Domingo via waypts.
May 12	Darien C-35 ¹²	Seadta Airplane Co.	Barranquilla via waypts.	May 10	No. 144-M ¹¹	Pan American-Grace Airways	Pimentel via wayports.
May 12	Magdalena	Hamburg-American Line.	Havre via wayports.	May 11	Ashville ¹⁰	U. S. Navy.	Puerto Cabezas, Nic.
May 12	Pellerin de la Touche	French Line.	Havre via wayports.	May 13	No. 9670 ¹¹	Pan American Airways.	San Salvador and waypts.
May 12	No. 144-M ¹¹	United Fruit Co.	Cartagena, Colombia.	May 13	No. 669-M ¹¹	Pan American Airways.	Miami via wayports.
May 12	Inapaquina ¹³	Pan American-Grace Airways	Pimentel via wayports.	May 13	Sixaola	United Fruit Co.	New York via Kingston.
May 12	Anachuca ¹³	A. Tagaropoulos	Colon, Rep. of Panama.	May 13	Anachuca ¹³	A. Tagaropoulos	Colon, Rep. of Panama.
May 13	Zacapa	A. Tagaropoulos	Colon, Rep. of Panama.	May 13	Inapaquina ¹³	Hamburg-American Line	Port Limon, Costa Rica.
May 13	Irona.	United Fruit Co.	New York via Kingston.	May 13	Magdalena.	United Fruit Co.	Port Limon via Bocas.
May 13	No. 668-M ¹¹	Pan American Airways	New Orleans, La.	May 14	Irona.	Pan American-Grace Airways	Pimentel via wayports.
May 13	No. 9685 ¹¹	Pan American Airways	Miami via wayports.	May 14	Zacapa.	United Fruit Co.	Colombian ports.
May 14	Bolivar.	Colombian S. S. Line.	New York via wayports.	May 14	Pellerin de la Touche.	French Line.	Havre via wayports.
May 15	Tolosa.	United Fruit Co.	New York via Habana.	May 15	Darien C-35 ¹¹	United Fruit Co.	New York via Kingston.
May 15	A. G. Leonet ¹²	W. W. Miller and L. Berry.	New Orleans via Habana.	May 15	Tolosa.	Colombian S. S. Line	Bluefields, Nicaragua.
May 15	Magdalena	Leyland S. S. Line.	Bluefields, Nicaragua.	May 15	La Emperatriz ¹²	George Rivers	Bluefields, Nicaragua.
May 16	Juan Sebastian Elcano	Hamburg-American Line.	Liverpool via wayports.	May 15	Pearl Marie ¹²	G. I. Bryan.	Colon, Rep. of Panama.
May 16	No. 670-M ¹¹	Spanish S. S. Line.	Port Limon, Costa Rica.	May 16	Annetta I. ¹³	P. W. Hamilton.	Colon, Rep. of Panama.
May 16	No. 9664 ¹¹	Pan American Airways.	Barecelona via wayports.	May 16	Berta ¹²	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.
May 16	No. 300-N ¹²	Pan American Airways.	Miami via wayports.	May 16	Cefalu	Standard Fruit & S. S. Co.	New Orleans and waypts.
May 16	Pearl Marie ¹²	Pan American-Grace Airways.	Pimentel via wayports.	.....	.....	.....	.....
May 16	Annetta I. ¹³	G. I. Bryan.	San Salvador and waypts.	.....	.....	.....	.....
May 16	Carmelita ¹²	P. W. Hamilton.	Colon, Rep. of Panama.	.....	.....	.....	.....
May 16	Berta ¹²	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	.....	.....	.....	.....
May 16	.....	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	.....	.....	.....	.....

¹⁰ Gunboat. ¹¹ Air mail carrier. ¹² Motor schooner. ¹³ Motor boat. ¹⁴ PORT OF BALBOA.

May 12	Real ¹⁴	Hans Elliot.	Panama Bay, R. P.	May 12	Real ¹⁴	Hans Elliot.	Panama Bay, R. P.
May 13	Nora ¹⁴	Arrow Oil Co.	Los Angeles, Calif.	May 14	Nora ¹⁴	Nueva Panama ¹²	Los Angeles, Calif.
May 15	Nueva Panama ¹²	Hans Elliot.	Panama Bay, R. P.	May 15	Real ¹⁴	Hans Elliot.	Panama Bay, R. P.
May 15	Real ¹⁴	Hans Elliot.	Panama Bay, R. P.	May 15	Sambu ¹⁴	Hans Elliot.	Panama Bay, R. P.
May 15	Sambu ¹⁴	Hans Elliot.	Panama Bay, R. P.	May 15	A. B. de Obarrio ¹⁴	A. Valdez.	Panama Bay, R. P.
May 15	A. B. de Obarrio ¹⁴	A. Valdez.	Panama Bay, R. P.	May 15	El Libertador ¹⁴	A. Valdez.	Panama Bay, R. P.
May 15	El Libertador ¹⁴	A. Valdez.	Panama Bay, R. P.	.....	.....	.....	.....

¹⁴ Tanker. ¹⁵ Motor schooner. ¹⁶ Motor ship.

¹⁷ Other than ships passing through the Canal.

Fresh Fruit Shipments from the United States Increase Heavily.

Fresh fruit shipments from the west coast of the United States totaled 210,553 tons in the past 7 months (October, 1930 to April, 1931, inclusive), showing the heavy increase of approximately 157 per cent over fresh fruit shipments from this area in the corresponding 7 months in 1929-1930. Of the total of 210,553 tons, 197,009 tons, or over 93 per cent, were destined to European ports. Of the total bound for Europe, 61,380 tons were not segregated by country of destination in the reports submitted; of the 135,629 tons for Europe definitely classified 56,639 tons went to Great Britain, 47,024 tons to Germany, 23,444 tons to Holland, and 8,522 tons were distributed among Norway, Sweden, Denmark, Belgium, France, and Italy.

The remaining 13,544 tons, or 7 per cent, of the total fresh fruit tonnage originating on the west coast of the United States during the past 7 months was destined as follows: 7,220 tons to the east coast of the United States, 5,587 tons to South America, 716 tons to Cristobal, and 21 tons to the West Indies.

The total fresh fruit shipments originating in the Pacific areas in the past 7 months totaled 224,158 tons, in comparison with 96,154 tons in the corresponding period in 1929-1930. Those from ports of the United States in the past 7 months were approximately 94 per cent of the total.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending May 16, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	
Cristobal	Panama R. R. S. S. Line		May 10		781
Tillie Lykes	Lykes Brothers		May 10		59
Tela	United Fruit Co.	May 10	May 10	30	385
Cauca	National Navigation Co.	May 10		162	
Odenwald	Hamburg-American Line	May 10	May 11	62	51
Corinto	Panama Mail S. S. Co.	May 10		936	
City of San Francisco	Panama Mail S. S. Co.		May 11		121
Santa Maria	Grace Line	May 11	May 12	140	118
Nosa Prince	N. O. & S. A. S. S. Co.	May 12	May 12	(¹)	65
Donau	North German Lloyd	May 12	May 12	3	202
Bennekom	Royal Netherlands S. S. Co.	May 12	May 13	116	139
Magdalena	Hamburg-American Line	May 12	May 13	124	(¹)
Sixaola	United Fruit Co.	May 12	May 13	361	704
Pellerin de la Touche	French Line	May 12	May 14	165	290
Salvador	Pacific Steam Navigation Co.		May 13		626
Iriona	United Fruit Co.	May 13	May 13	737	64
Teno	Chilean S. S. Line	May 13	May 13	4	(¹)
Erlangen	North German Lloyd	May 13	May 13	142	297
Lochgoil	Pacific Steam Navigation Co.	May 13	May 13	(¹)	223
Kwansai Maru	Osaka Shosen Kaisha	May 13	May 14	156	78
Zaeapa	United Fruit Co.	May 13	May 14	599	464
Santa Clara	Grace Line	May 14	May 14	201	71
Suriname	United Fruit Co.	May 14	May 15	1,239	(¹)
Bolivar	Colombian S. S. Line	May 14	May 15	37	395
West Camargo	McCormick S. S. Co.	May 14	May 15	19	32
Hague Maru	Osaka Shosen Kaisha	May 14	May 15	17	(¹)
California	Navigazione Libbra Triestina	May 14	May 15	(¹)	85
Indiana	French Line	May 14	May 15	726	(¹)
Seattle	Hamburg-American Line	May 14	May 15	106	154
Laguna	Pacific Steam Navigation Co.	May 14	May 14	(¹)	58
La Imperatriz	George Rivers		May 15		48
Tolca	United Fruit Co.	May 15	May 15	310	62
Cefalu	Standard Fruit & S. S. Co.	May 15	May 16	488	359
San Anselmo	States S. S. Line	May 15	May 15	181	(¹)
Darian	Leyland S. S. Line	May 15		721	
A. G. Leonet	Miller & Berry	May 15		37	
Taranger	Westfal, Larsen & Co.	May 16	May 16		44
Juan Sebastian Elcano	Spanish S. S. Line	May 16		134	
Bodegraven	Royal Netherlands S. S. Co.	May 16		151	
Durazzo	Hamburg-American Line	May 16		1,657	
Magdalena	Hamburg-American Line	May 16		26	
Manizales	Hamburg-American Line		May 16		238
Santa Teresa	Grace Line	May 16	May 16	151	11
Pearl Marie	R. Feuillebois	May 16	May 16	(¹)	40

¹ No cargo discharged.² No cargo laded.³ One package.

Navigation Regulations.—Supplement No. 3 to Chapter XII, Vessel Inspection Service, of Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters.

REGULATION 159.30 is to be amended as follows:

In last sentence after the word "experience" insert the words "as licensed officer."

REGULATION 159.53 is to be amended as follows:

Subparagraph (8), after the word "vessels" substitute "." for ";" and strike out "or;" also strike out subparagraph (9).

REGULATION 159.54 is to be amended as follows:

Subparagraph (7), after the word "service" (2d line) insert the words "as licensed officer," and after the word "vessels" substitute "." for ";" and strike out the word "or." Also strike out subparagraph (8).

REGULATION 159.57 is to be amended as follows:

Subparagraph (4), change the word "or" to "and."

REGULATION 159.58 is to be amended as follows:

Strike out subparagraph (4) and renumber subparagraphs (5) and (6) to (4) and (5), respectively.

REGULATION 159.59 is to be amended as follows:

Strike out subparagraph (4) and renumber subparagraphs (5) and (6) to (4) and (5), respectively.

REGULATION 159.60 is to be amended as follows:

Strike out subparagraph (3) and renumber subparagraphs (4), (5), (6), and (7) to (3), (4), (5), and (6), respectively.

REGULATION 160.3, as contained in Supplement No. 2, dated October 14, 1929, is to be amended as follows:

Strike out the words "and safety" in the 3d line and the word "and" in last line; substitute "," for "." at end of sentence and add "and safety valves to be set to working pressure."

REGULATION 162.15 is to be amended as follows:

Strike out the word "self-propelled" in lines 1 and 2, and substitute "100" for "500," 2d line.

REGULATION 162.16 is to be amended as follows:

Strike out words "and manning" in 3d line.

REGULATION 162.36 is to be amended as follows:

In line 4, change "Rule 2" to "Rules 1 and 2."

REGULATION 162.76 is to be amended as follows:

Line 16, after the word "extinguishers" substitute "," for ";" and strike out "2½ gallons each," substituting therefor the words "type, capacity, and location as approved by the Board of Local Inspectors."

REGULATION 162.77 is to be amended as follows:

Line 14, after the word "extinguishers" substitute "," for ";" and strike out "2½-gallon capacity on berth deck," substituting

therefor the words "type, capacity, and location as approved by the Board of Local Inspectors."

REGULATION 162.78 is to be amended as follows:

Line 10, after the word "extinguishers" substitute "," for ";" and strike out "2½-gallon capacity," substituting therefor the words "type, capacity, and location as approved by the Board of Local Inspectors."

REGULATION 162.81 is to be amended as follows:

Between lines 12 and 13 insert "2 fire extinguishers, foam type."

REGULATION 162.82 is to be amended as follows:

After the words "extinguishers" insert "," and strike out remainder of paragraph, substituting therefor the words "number, type, capacity, and location as approved by the Board of Local Inspectors."

H. BURGESS,
Governor.

Navigation Regulations.—Supplement No. 20, Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters.

REGULATION 3.1, contained in Supplement No. 15 of April 25, 1929, is hereby amended to read as follows:

REGULATION 3.1. *Load and Trim:* All vessels must be properly trimmed before entering the Canal. They should be on an even keel or with a slight drag aft. Any vessel with a list between three degrees and ten degrees, or that is down by the bow to such an extent as to affect its maneuverability, or that is so loaded as to make it unwieldy in the Canal, will be denied transit until the Master, in the presence of the Pilot, has signed a certificate relieving The Panama Canal of all responsibility for any damage that may be sustained by said vessel or by Panama Canal structures or equipment as a result of such condition. A vessel with a list of more than ten degrees will be denied transit. All cases of vessels with considerable trim by the bow should be referred to the Port Captain concerned with Pilot's recommendation before beginning transit.

REGULATION 18.1 is hereby established:

REGULATION 18.1. Rule 18 shall not be interpreted as authorizing vessels less than 65 feet in length, or barges or rafts of any size not on regular transit schedule and not paying tolls, to navigate the waters of any locks or of Gaillard Cut to or from Gatun Lake in partial transit of the Canal; specific authority of the Governor must be obtained through the Marine Superintendent for each such partial transit. In this connection see Rule 49 and Regulation 49.1.

REGULATION 26.1, contained in Supplement No. 10 of June 27, 1928, is amended as follows:

In subparagraph (b), 4th line, strike out the words "to follow" and substitute the word "with." In subparagraph (e), after last sentence, add new sentence: "In this connection see Regulation 18.1."

REGULATION 41.4 is hereby established:

REGULATION 41.4. *Towing Lines for Vessels Carrying Crude Oil Products*: Vessels used for carrying volatile crude oil products with flash point below 73 degrees, and other liquids or solids giving off highly inflammable gases, whether with cargo or in ballast—unless gas-free in ballast—will be required to use insulated towing gear supplied by The Panama Canal, for which an extra charge will be made.

REGULATION 47.12, contained in Supplement No. 2 dated May 12, 1926, is to be renumbered Regulation 47.10, and amended as follows:

After the words "15th Naval District" change period to comma and add the following: "and except that vessels arriving at either terminal port which are to transit the Canal will be allowed alongside the terminal docks, provided the explosives are properly stowed in space which need not be opened while the vessel is alongside."

Also after the words "explosive anchorage" in the 11th and 12th lines strike out period and add "to be provided by the Port Captain or consignee, for final disposition, as occasion warrants, and as previously arranged. Unloading at Panama Canal docks will be permitted only upon specific authority of the Governor which must be obtained in each case."

Strike out last sentence which reads "The lighters will be unloaded at the Cristobal Dock, or, in case of request at the Mine Dock."

Also renumber Regulation 47.9 to Regulation 47.7, Regulation 47.10 to Regulation 47.8, Regulation 47.11 to Regulation 47.9, Regulation 47.13 to Regulation 47.11, and Regulation 47.14 to Regulation 47.12.

REGULATION 64.1 is hereby established as follows:

REGULATION 64.1. A white light with fresnel or fluted lens not less than 3 inches in diameter will be considered as complying with light mentioned in Rule 64 (c).

REGULATION 65.1 is hereby established as follows:

REGULATION 65.1. A white light with fresnel or fluted lens not less than 3 inches in diameter will be considered as complying with light mentioned in Rule 65 (b).

REGULATION 171.1 is amended as follows:

Add the following sentence: "Vessels approaching the Canal

from the Pacific, in addition to the above, shall report time of passing Cape Mala and the speed being made good."

REGULATION 174.1, as contained in Supplement No. 3 dated September 3, 1926, is to be changed to read as follows:

REGULATION 174.1. *Routing of Messages:* Messages will be sent to Colon Radio Station, call letters "NAX," when in the area to the northward of a point 25 miles south of the Pacific entrance of the Canal, in the Canal, or in the area outside the Atlantic entrance of the Canal. Ships in the Pacific when more than 25 miles from the Pacific entrance of the Canal will route messages via Cape Mala Radio Station, call letters "NGR," from which station messages will be relayed to the Canal Zone or the Republic of Panama by telegraph.

In Chapter XV make the following changes:

Paragraph 8 (page 65), under sketches of signals, change numerals "1," "2," and "3" to words "one," "two," and "three," and change capitals "N's" and "S's" in "northbound" and "southbound," respectively, to small "n's" and "s's."

Paragraph 18 (page 68), line 2, after the word "equipment" insert the words "(including radio)."

Paragraph 25 (page 68), substitute comma for period and add "but will be used only in Canal Zone waters except in cases where great emergency exists, such emergency to be determined by the Marine Superintendent."

Paragraph 42 (page 70), strike out "Colon" and substitute "Cristobal, Balboa."

Paragraph 43 (page 70), after last sentence add "There is also an air mail service to and from the United States, Central and South America, arrivals and departures of which may be found in the daily press."

Supplement No. 1, dated April 1, 1926, is to be corrected as follows:

Interchange lower "section" views of Figures 1 and 2 on pages 2 and 3, respectively, to correspond with "plan" views above them.

H. BURGESS,
Governor.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 16, 1931.

No. 887.

Colombia, approaches to Cartagena, buoys reported replaced.—The master of the British S. S. *Darian* reports that on May 14, 1931, the following buoys were replaced in Cartagena Harbor:

BOCA CHICA ENTRANCE BUOYS.—Both buoys in position and lighted.

CARREYA SHOAL LIGHT BUOY.—In position and lighted.

SANTA CRUZ BANK LIGHT BUOY.—In position and lighted.

H. BURGESS,
Governor.

Insurance Business in the Canal Zone, Calendar Year, 1930.

Eight insurance companies transacted business in the Canal Zone in 1930. All companies licensed for 1929, except the Home Life Insurance Company, renewed their licenses during the year. The business is summarized as follows:

MISCELLANEOUS COMPANIES.

	Premiums received in 1930.	Losses paid in 1930.
Property damage and collision		
Accident	\$4,530.04	\$861.91
Automobile liability	6,254.03	1,355.45
Fidelity	1,690.13	470.99
Fire	4,155.62	
Health	1,679.46	534.33
Liability other than automobile	14,938.06	4,046.10
Burglary and theft	40.70	
Automobile property damage	1,707.41	994.34
Surety	7,951.48	430.23
Plate glass	145.21	289.00
Automobile collision	538.11	48.11
Total	43,630.25	9,030.46

Premium tax paid in Canal Zone, \$655.95.

LIFE INSURANCE COMPANIES.

	Number.	Amount.
Policies in force, December 31, 1929	462	\$1,419,088.00
Policies issued during 1930	163	485,019.00
Total	625	1,904,107.00
Policies lapsed during 1930	51	162,582.00
Policies in force, December 31, 1930	574	1,741,025.00
Losses and claims unpaid, December 31, 1929		
Losses and claims incurred during 1930	4	10,500.00
Total	4	10,500.00
Losses and claims settled during 1930	2	7,536.44
Losses and claims unpaid on December 31, 1930	2	2,963.56
Premiums collected during 1930		59,235.80
Premium tax paid in Canal Zone		893.13

The relatively small amount of fire insurance business written is due to the fact that there are few structures in the Canal Zone outside of those owned by the Government of the United States, and none of such property is covered by fire insurance.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 12 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective May 16, 1931.

Commodities.	Unit.	Price.
Brass, bar, average	Lb.	\$0.24
Brass, sheet, average	Lb.	.24
Bronze, Tobin, average	Lb.	.24
Gasoline, motor grade	Gal.	.09
Metal, yellow	Lb.	.23
Oakum, Navy, spun	Lb.	.23
Oakum, Navy, unspun	Lb.	.13
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder	Gal.	.28
Oil, burning, Colza	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135	Gal.	.33
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250	Gal.	.45
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250	Gal.	.39
Oil, kerosene, in drums	Gal.	.07
Oil, marine engine	Gal.	.49
Paint, lead, white, dry	Lb.	.14
Paint, lead, white, in oil	Lb.	.11
Paint, zinc oxide, dry	Lb.	.10
Paint, zinc oxide, in oil	Lb.	.11
Grease, gear, chain and wire rope, lubricating	Lb.	.05
Grease, yellow, cup, No. 3	Lb.	.08
Grease, yellow, cup, No. 5	Lb.	.09
Soda, ash	Lb.	.03
Waste, cotton, colored	Lb.	.13
Waste, cotton, white	Lb.	.16

Coal.

Coal, bunker, Navy Standard, is supplied to steamships including warships of all nations, trimmed in bunkers at \$7.25 at Cristobal and \$10.25 at Balboa per ton of 2,240 pounds. Extra charges are made in accordance with a published tariff for special trimming at the request of the officers of the ship, for galley, lump or run-of-mine coal in sacks, and for delivery, when coal is furnished from lighters or launches away from the coaling piers.

Coal can be bunkered by bunkering machines at any rate up to 1,500 tons per hour, regulated by the amount of necessary trimming.

Coal for cargo is sold at prices quoted on application and on authorization of the Governor.

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Volume XXIV. Balboa Heights, C. Z., May 27, 1931. No. 43.

CANAL WORK IN APRIL, 1931.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of April, 1931.

BALBOA HEIGHTS, C. Z., May 18, 1931.

*The Honorable, the Secretary of War,
Washington, D. C.*

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of April, 1931:

TRANSITS AND TOLLS.

During the month, 453 commercial vessels and 17 small nonseagoing launches under 20 tons transited the Canal. In addition to these there were 32 vessels belonging to the United States Government and 1 transit of a Panamanian Government vessel, on which no tolls were collected, making a total of 503 transits for the month, or a daily average on all traffic of 16.77.

Tolls on the 453 commercial vessels amounted to \$2,014,349.13, and on the launches to \$64.50, a total of \$2,014,413.63, or a daily average on all traffic of \$67,147.12.

In comparison with April, 1930, commercial traffic for the past month declined 36 transits and \$218,413.87 in tolls, or 7.4 per cent and 9.8 per cent, respectively. In comparison with the previous month, traffic for the past month showed a slight increase—14 transits and \$49,914.91 in tolls, or 3.1 per cent and 2.5 per cent, respectively.

Commercial traffic for the first 10 months of the current fiscal year in comparison with the same period last year shows a decrease of 10.1 per cent in transits, 6.6 per cent in net tonnage (Panama Canal measurement), 16.5 per cent in cargo passing through, and 8.4 per cent in tolls assessed.

The total numbers of craft of all kinds transiting the Canal during the month of April in the two preceding years and in 1931 are shown in the following tabulation:

	April, 1929.	April, 1930.	April, 1931.
Commercial vessels.....	540	489	453
Launches (under 20 tons).....	41	7	17
Noncommercial vessels:			
United States Government.....	40	43	32
Panamanian Government.....	3	1	.....
For repairs.....	3	1	1
Total.....	627	541	503

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North- bound.	South- bound.	Total.
Gatun.....	10	15	25
Pedro Miguel.....	23	26	49
Miraflores.....	23	23	46
Total.....	56	64	120

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tons of cargo carried, and tolls collected, from the commercial traffic transiting the Canal each month from the beginning of the fiscal year 1931 to the end of April, 1931, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929-30	1930-1	1929-30.	1930-1.	1929-30.	1930-1.	1929-30.	1930-1.
July.....	527	488	2,468,280	2,438,895	2,598,162	2,402,047	\$2,259,582.37	\$2,180,511.82
August....	541	465	2,558,739	2,345,573	2,680,730	2,148,460	2,327,437.86	2,080,230.42
September	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.58
October....	564	517	2,747,949	2,584,160	2,845,643	2,394,410	2,485,897.71	2,288,982.08
November	525	479	2,495,906	2,371,487	2,534,631	2,263,200	2,244,895.94	2,098,357.36
December	522	495	2,548,771	2,473,626	2,524,934	2,166,884	2,309,030.88	2,192,583.85
January....	531	476	2,601,628	2,389,871	2,611,632	2,106,937	2,360,211.24	2,108,140.42
February...	491	431	2,369,255	2,134,866	2,377,900	1,930,219	2,131,386.12	1,915,902.78
March.....	515	439	2,505,859	2,211,934	2,558,238	1,915,507	2,260,002.36	1,964,434.22
April.....	489	453	2,479,096	2,292,805	2,456,782	2,011,117	2,232,763.00	2,014,349.13
Total....	5,228	4,701	25,203,744	23,548,641	25,621,435	21,398,372	22,812,996.88	20,900,595.66

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian governments, including merchant vessels chartered by these governments, and vessels transiting solely for repairs, do not pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for April in the years 1929, 1930, and 1931, and comparison with the monthly averages for the calendar year 1930:

	April, 1929.	April, 1930.	April, 1931.	Average per month for calendar year 1930.
Number of vessels.....	540	489	453	490
Panama Canal net tonnage.....	2,488,176	2,479,096	2,292,805	2,438,406
United States net tonnage.....	1,899,607	1,849,804	1,686,523	1,826,376
Registered gross tonnage.....	3,127,365	3,075,488	2,814,348	3,025,071
Registered net tonnage.....	1,917,378	1,872,024	1,711,593	1,839,006
Tolls.....	\$2,281,087.27	\$2,232,763.00	\$2,014,349.13	\$2,178,835.41
Tons of cargo carried.....	2,719,668	2,456,782	2,011,117	2,320,662

The average daily number of transits, tonnage (Panama Canal measurement), tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for calendar year 1930.
	April, 1929.	April, 1930.	April, 1931.	
Number of transits.....	18.00	16.30	15.10	16.12
Panama Canal net tonnage.....	82,939	82,637	76,427	80,167
Tolls.....	\$76,036.24	\$74,425.43	\$67,144.97	\$71,632.95
Tons of cargo carried.....	90,655	81,893	67,037	72,296

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of April in 1929, 1930, and 1931, are shown in the following tabulation:

	Average per vessel.		
	April, 1929.	April, 1930.	April, 1931.
Panama Canal net tonnage.....	4,608	5,070	5,061
United States net tonnage.....	3,518	3,783	3,723
Registered gross tonnage.....	5,791	6,289	6,213
Registered net tonnage.....	3,551	3,823	3,778
Tolls.....	\$4,224.24	\$4,565.98	\$4,446.69
Tons of cargo (including vessels in ballast).....	5,036	5,024	4,440
Tons of cargo (laden vessels only).....	5,786	5,713	5,392

NATIONALITY OF VESSELS.

Sixteen nationalities were represented in the commercial traffic through the Canal in April, 1931. Vessels of United States registry, with 194, led in the number of transits, while those flying the British flag, with 110, were second. Vessels of these two nationalities made up 67.1 per cent of the total transits for the month. Vessels of Norwegian and German registry were next with 33 and 25 transits, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo through the Canal during the month of April was 2,011,117 tons, a decrease of 445,665 tons, or 18.1 per cent, in comparison with April, 1930. Cargo from the Atlantic to the Pacific aggregated 553,609 tons, as compared with 499,617 tons for the previous month, and 806,119 tons in April, 1930. From the Pacific there were 1,457,508 tons, as compared with 1,415,890 tons for the previous month, and 1,650,663 tons in April, 1930.

From the Atlantic to the Pacific various manufactured goods, totaling 158,638 tons, constituted the heaviest item of cargo, followed by phosphates with 41,291 tons, mineral oils with 41,204 tons, cotton with 32,976 tons, paper with 16,987 tons, sugar with 13,045 tons, and cement with 12,131 tons. There was a decrease of 252,510 tons, or 31.3 per cent, in cargo moving in this direction as compared with April, 1930.

From the Pacific to the Atlantic mineral oils, as in the past, constituted the leading commodity, totaling in April, 1931, 367,931 tons. This was followed by lumber with 194,422 tons, sugar with 144,589 tons, wheat with 123,126 tons, ores (principally iron) with 96,857 tons, and nitrates with 80,729 tons. Sugar shipments via the Canal increased 72,264 tons, or 99.9 per cent, over April 1930, and nitrates increased 9,666 tons, or 13.6 per cent. The other above-listed items decreased as follows in comparison with April, 1930: Mineral oils, 52,321 tons, or 12.4 per cent; lumber, 111,101 tons, or 36.4 per cent; wheat, 43,116 tons, or 25.9 per cent; and ores, 113,618 tons, or 54.0 per cent. In aggregate, there was a decrease of 193,155 tons, or 11.7 per cent, in cargo routed in this direction in comparison with April, 1930.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton, nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.906 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.725 per net ton, Panama Canal measurement.

Taking traffic through the Canal for the month of April, 1931, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$4,058.75	\$4,103.00	\$44.25	
British.....	537,621.39	574,398.40	36,777.01	
Chilean.....	15,856.25	17,899.00	2,042.75	
Colombian.....	1,488.33	1,251.40		\$236.93
Danish.....	67,775.20	75,584.00	7,808.80	
Danzig.....	14,756.28	13,158.40		1,597.88
Dutch.....	38,413.75	45,672.00	7,258.25	
French.....	37,441.25	46,393.00	8,951.75	
German.....	69,160.00	83,259.00	14,099.00	
Italian.....	41,018.75	48,228.00	7,209.25	
Japanese.....	111,233.30	107,923.00		3,310.30
Norwegian.....	128,205.14	139,086.60	10,881.46	
Panamanian.....	4,564.40	7,008.40	2,444.00	
Spanish.....	* 1,648.50	* 1,648.50		
Swedish.....	40,475.87	47,282.60	6,806.73	
United States.....	900,631.97	937,279.00	36,647.03	
Total.....	2,014,349.13	2,150,174.30	140,970.28	5,145.11
Net increase on all traffic.....			135,825.17	

* Naval vessel of 3,297 displacement tons.

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$23,227.38
United States foreign trade.....	16,353.99
United States-Canal Zone trade.....	2,934.34
^a Total.....	36,647.03

^a Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in April, 1931, is shown in the following tabulation, segregated by nationality of vessels and direction of transit; laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....		1.69	1.69
British.....	.56	1.12	.89
Chilean.....	.41	1.02	.57
Colombian.....	1.35	1.29	1.33
Danish.....	1.08	1.62	1.49
Danzig.....		1.85	1.85
Dutch.....	.39	1.28	.82
French.....	.27	1.36	.95
German.....	.48	1.15	.77
Italian.....	.14	.60	.44
Japanese.....	1.16	1.43	1.29
Norwegian.....	.73	1.43	1.23
Panamanian.....	.56		.56
Swedish.....	.73	2.24	1.53
United States.....	.71	1.40	1.09
Averages, April, 1931.....	.66	1.33	1.04
Averages, April, 1930.....	.84	1.33	1.11
Averages, April, 1929.....	.95	1.45	1.25

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of April is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	2	9,347	\$10,018.75	37	230,206	\$228,249.10
Ballast.....	29	169,176	121,806.72	1	4,997	3,597.84
General cargo ships:						
Laden.....	162	819,249	726,286.30	171	863,542	772,787.05
Ballast.....	40	181,998	132,859.03	2	2,337	1,682.64
Noncargo-carrying ships:						
Dredge.....				1	1,049	755.28
Hull.....				1	20	15.00
Naval.....				1		1,648.50
Passenger.....	1	5,287	3,662.50	1	14,476	10,170.00
Yachts.....	1	86	63.00	3	1,035	747.42
Total.....	235	1,185,143	994,696.30	218	1,107,662	1,019,652.83
Method of propulsion:						
Steam.....	159	788,174	683,113.94	148	729,628	678,547.09
Motor.....	73	396,786	311,408.46	69	378,014	341,090.74
Motor schooner.....	2	151	135.50			
Nonpropelled.....	1	32	38.40	1	20	15.00
Total.....	235	1,185,143	994,696.30	218	1,107,662	1,019,652.83

Of the 307 steam-driven vessels, 228 were oil burning, 73 coal burning, and 6 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of April, 1931. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Airplane carriers.....	2	¹ 66,000	\$33,000.00			
Cruisers.....				1	² 8,150	\$4,075.00
Destroyers.....	4	² 4,860	2,430.00			
Gunboats.....				1	² 1,425	712.50
Launches.....	5	³ 50	37.50			
Minesweepers.....	2	² 1,900	950.00	1	² 950	475.00
Submarines.....	3	² 2,745	1,372.50			
Tankers.....				1	³ 6,258	4,693.50
Transports.....				1	³ 3,908	4,885.00
Tugs.....	1	² 1,000	500.00	1	² 1,000	500.00
U. S. Army vessels:						
Dredges.....	1	² 1,400	700.00			
River boat.....	1	³ 700	525.00			
Transports.....	2	³ 7,816	9,770.00	3	³ 13,107	15,383.75
Tugs.....	1	³ 46	34.50	1	³ 46	34.50
Total, U. S. Government.....	22		49,319.50	10		30,759.25
Vessels for repairs:						
General cargo.....				1	² 161	193.20
Grand total.....	22		49,319.50	11		30,952.45

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of April, 1931, carried cargo as follows: Atlantic to Pacific, 1,443 tons; Pacific to Atlantic, 878 tons; total, 2,321 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of April, 1931. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	8	52	\$48.90
Pacific to Atlantic.....	9	27	15.60
Total.....	17	79	64.50

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of April, 1931, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	102,208	39,166	141,374
Local cargo shipped..... tons..	7,882	811	8,693
Transit cargo arriving..... tons..	1,999,163	1,978,839	3,978,002
Transit cargo clearing..... tons..	1,991,561	1,987,709	3,979,270
Cargo received for transshipment..... tons..	25,774	564	26,338
Cargo transhipped..... tons..	28,194	560	28,754
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	140	33	173
Number of releases issued.....	740	94	834
Tons received.....	1,371	397	1,768
Tons withdrawn.....	1,457	377	1,834
Packages received.....	6,980	1,001	7,981
Packages withdrawn.....	7,950	1,955	9,905
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	30		30
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons..	15,266		15,266
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	66	7	73
U. S. Army, including vessels..... tons..	30		30
Panama Railroad Company..... tons..		11	11
Individuals and companies, including galley coal..... tons..	150	62	212
Transferred to Navy..... tons..	80		80
Total sales and issues..... tons..	15,592	80	15,672

	Cristobal.	Balboa.	Total.
Coal on hand, April 1, 1931.....	39,577		39,577
Coal on hand, May 1, 1931.....	53,629		53,629
Coal received during month.....	29,644		29,644
Coal received from Navy.....		80	80
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments.....	7,919.60	14,151.75	22,071.35
Panama Railroad Company.....	901.86	532.33	1,434.19
U. S. Army and Navy.....	484.50	856.03	1,340.53
Individuals and companies.....		409.19	409.19
Total sales and issues.....	9,305.96	15,949.30	25,255.26
Fuel oil on hand, May 1, 1931.....	55,997.95	27,327.32	83,325.27
Diesel oil borrowed from Union Oil Company.....	254.89		254.89
Diesel oil issued and sold during April, 1931.....	254.89	2,078.30	2,333.19
Diesel oil repaid to Union Oil Company.....		449.58	449.58
Diesel oil on hand, May 1, 1931.....	1,083.28	30,122.25	31,205.53
Miscellaneous transfers.....	32,558.88	586.18	33,145.06
Gasoline and kerosene pumped for The Panama Canal.....	2,799.20	5,334.00	8,133.20
Gasoline pumped for individuals and companies.....	680.86	7,970.30	8,651.16
Oil pumped for individuals and companies:			
Receipts.....	341,896.95	154,777.66	496,674.61
Issues.....	228,030.80	202,339.72	430,370.52
Oil pumped for U. S. Navy.....	5,557.00	37,534.00	43,091.00
Total fuel oil, gasoline, and kerosene handled.....	621,084.54	426,569.46	1,047,654.00
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	11	6	17
Measured for Panama Canal net tonnage.....	2	2	4
Remeasured for Panama Canal net tonnage.....	4	4	8
Panama Canal net tonnage corrected.....	4	5	9
U. S. equivalent tonnage corrected.....	6	5	11
Services of harbor equipment:			
Tugs, total operating hours.....	308 $\frac{1}{2}$	285 $\frac{1}{2}$	594
Launches, total operating hours.....	1,271 $\frac{1}{2}$	1,478	2,749 $\frac{1}{2}$
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$10,196.25	\$7,227.50	\$17,423.75
Pilotage.....	17,078.00	7,681.00	24,759.00
Seamen.....	10,896.00	10,140.00	21,036.00
Launch service.....	1,821.50	2,671.50	4,493.00
Wharfage.....	14,389.30	5,776.02	20,165.32
Ships measured.....	40.00	15.00	55.00
Miscellaneous.....	396.33	312.50	708.83
Ships repaired at Panama Canal shops:			
Commercial.....	38	6	44
U. S. Army and Navy.....	8	4	12
Panama Canal equipment.....	9	9	18
Total.....	55	19	74
Vessels dry-docked:			
Commercial.....	4		4
U. S. Army and Navy.....	1	2	3
Panama Canal equipment.....	2	5	7
Total.....	7	7	14
Clearances issued.....	267	238	505
Bills of health issued.....	283	247	530

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal.	545	3,291,033	2,037,886	468	2,923,681	1,805,808
Vessels entering port but not transiting Canal.	64	345,140	206,094	4	26,267	14,730
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	118	729,290	430,651	98	640,495	384,771
<i>Ships clearing.</i>						
All vessels, including those transiting Canal.	512	3,282,220	2,028,807	470	2,969,233	1,846,894
Vessels clearing port but not transiting Canal.	63	348,744	209,704	5	23,002	12,534
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	113	696,401	411,500	97	628,004	376,851

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	871	729	1,600	132	377	509
From Pacific ports.....	277	183	460	336	161	497
Total disembarking.....	1,148	912	2,060	468	538	1,006
Embarcking:						
For Atlantic ports.....	1,079	798	1,877	152	317	469
For Pacific ports.....	149	168	317	275	271	546
Total embarcking.....	1,228	966	2,194	427	588	1,015
Remaining on board:						
From Atlantic to Pacific ports.....	1,117	1,370	2,487	1,198	1,217	2,415
From Pacific to Atlantic ports.....	2,275	2,140	4,415	2,320	2,253	4,573
From Atlantic to Atlantic ports.....	1,086	121	1,207			
From Pacific to Pacific ports.....				10	76	86
Total remaining on board.....	4,478	3,631	8,109	3,528	3,546	7,074
Total arriving.....	5,628	4,543	10,169	3,996	4,084	8,080
Total departing.....	5,706	4,597	10,303	3,955	4,134	8,089

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	235	62	26.4
Pacific to Atlantic.....	218	66	30.3
Total.....	453	128	28.3

In addition to the aforesaid, 52 passenger-carrying vessels called at the port of Cristobal, and 1 at Balboa without transiting the Canal, making a total of 181 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of April, 1931, 36 commercial airplanes entered and 42 cleared at Cristobal, and 1 entered and cleared at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of April, 1931, together with the total sales in the corresponding months in 1930 and 1929:

	Icc.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels.....	\$1,080.65	\$8,648.93	\$14,977.46	\$191.59	\$6,098.18	\$30,996.81
Government vessels.....	134.80	1,883.33	11,304.61	7.09	1,064.28	14,394.11
P. R. R. vessels.....	3.60	300.50	197.78	469.13	10.20	981.21
Total sales, April, 1931.....	1,219.05	10,832.76	26,469.85	667.81	7,172.66	46,372.13
Total sales, April, 1930.....	2,254.57	13,204.68	36,038.35	821.43	7,392.27	59,711.30
Total sales, April, 1929.....	3,483.25	16,972.62	48,163.53	1,033.30	9,482.32	79,139.02
Sales at Balboa to:						
Commercial vessels.....	362.17	3,640.46	10,365.88	545.45	6,626.08	21,540.04
Government vessels.....	269.32	11,049.01	6,218.07	138.55	1,450.07	19,125.02
P. R. R. vessels.....				37.78		3.78
Total sales, April, 1931.....	631.49	14,689.47	16,583.95	721.78	8,076.15	40,702.84
Total sales, April, 1930.....	1,021.78	5,856.22	43,842.09	1,393.65	13,528.21	65,641.95
Total sales, April, 1929.....	1,374.55	13,343.59	39,350.48	825.07	5,208.25	60,101.94

The aggregate sales to Government vessels during the month was \$33,519.13; to Panama Railroad vessels, \$1,018.19; and to other commercial vessels, \$52,536.85; making the total sales to all vessels, \$87,074.97. These figures are subject to minor change on final audit.

LOCK OPERATIONS.

The overhaul of the Gatun Locks, which was begun on January 7, 1931, was completed on April 9, and normal operation from 7 a. m. to 11 p. m. was resumed on April 11. During the overhaul these locks were operated on a 24-hour basis.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of April, 1931, as compared with the corresponding month in 1930 and 1929:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. ¹			April, 1929.	April, 1930.	April, 1931.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	209	217	426	9	10	19	514	487	445
Pedro Miguel.....	214	226	440	11	17	28	507	505	468
Miraflores.....	214	225	439	10	14	24	510	498	463
Number of vessels put through locks.									
Gatun.....	218	234	452	37	46	83	642	563	535
Pedro Miguel.....	218	233	451	46	49	95	681	570	546
Miraflores.....	218	233	451	46	43	89	686	568	540

¹ Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	34	35	32
Panama Canal equipment.....	25	49	46
Lanthees (under 20 tons).....	23	10	10
Vessels for repairs.....	1	1	1

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in April, 1931, as compared with the preceding month and the corresponding month in 1930:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	1,392,070,000	1,034,240,000	1,033,980,000
Leakage.....	30,000,000	25,000,000	20,000,000
Maintenance.....	42,740,000		
Total, April, 1931.....	1,464,810,000	1,059,240,000	1,053,980,000
Total, March, 1931.....	1,822,210,000	1,275,160,000	1,304,570,000
Total, April, 1930.....	1,512,870,000	1,361,520,000	1,347,130,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of April, 1931, are shown in comparative form in the following tabulation:

	April.		April—Years of record.		
	1930.	1931.	Maximum.	Minimum.	Mean.
Discharge of Chagres River at Alhajuela.....	<i>C. f. s.</i> 951	<i>C. f. s.</i> 800	<i>C. f. s.</i> 3,140	<i>C. f. s.</i> 281	<i>C. f. s.</i> 979
Maximum momentary discharge for the month.....	1,884	4,226	29,200	240	.....
Gatun Lake watershed, total yield.....	1,890	1,252	6,263	305	1,844
Gatun Lake watershed, net yield.....	1,216	493	5,400	-706	990
Draft on Gatun Lake for lockages and power.....	2,136	2,573	2,648	1,019	2,198

¹ April, 13, 1915.

² 1914 not included.

³ Hydroelectric plant carrying full power load.

The monthly mean discharge of the Chagres River at Alhajuela for April, 1931, was 800 c. f. s., which is 18 per cent below the 30-year average of 979 c. f. s. The maximum monthly mean discharge on record for April is 3,140 c. f. s. in 1910, and the minimum is 281 c. f. s. in 1926. The maximum momentary discharge for the month was 4,226 c. f. s. at elevation 94.52 feet on the 26th, and the minimum was 428 c. f. s. at elevation 91.51 feet on the 17th. The maximum momentary discharge on record for April is 29,200 c. f. s. at elevation 102.35 feet on April 3, 1915, and the minimum is 240 c. f. s. at elevation 90.20 feet on April 30, 1920.

Gatun Lake varied in elevation during April from a maximum of 83.76 feet on the 1st to a minimum of 82.53 feet on the 30th. The total yield of Gatun Lake watershed was 1,252 c. f. s., which is 32 per cent below the 18-year April average. The maximum total yield on record for April is 6,263 c. f. s. in 1915, and the minimum is 305 c. f. s. in 1926.

Miraflores Lake varied in elevation between a maximum of 54.34 feet on the 5th, and a minimum of 53.00 feet on the 16th. The mean elevation for the month was 53.68 feet and at midnight on the 30th the lake elevation was 53.68 feet.

SEISMOLOGY.

Four seismic disturbances were registered during the month—on the 10th, 13th, 19th, and 24th. The disturbance of the 10th was felt distinctly in La Palma, Republic of Panama.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,544,700 kilowatt hours, and the computed water consumption was 4,199,427,144 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 7,200 kilowatt hours, and the fuel oil consumption was 23.38 barrels. This station was operated only on standby and peak-load service during the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 31 vessels during the month. There were 400 work orders issued during the month, as compared with 339 issued during the previous month.

MECHANICAL DIVISION.

During the month of April, 1931, miscellaneous repairs were made on 55 vessels at Cristobal and 19 at Balboa. Seven vessels were dry-docked at Cristobal and 7 at Balboa. The dipper dredge *Cascadas* of the Dredging Division was docked for general overhaul during the month. The United States Navy's minesweeper *Mallard* entered Balboa shops for docking and general overhaul. Minor repairs were completed on the U. S. S. *Salinas* and tug *Sciota*.

MUNICIPAL ENGINEERING DIVISION.

On the Thatcher Highway under construction from the west bank of the Canal opposite Balboa to the Zone boundary line near Arraijan, 10,535 cubic yards were excavated and utilized in connection with grading; 2,018 cubic yards of rock were crushed; and concrete bridge was completed at station No. 148.

The Paraiso-Summit cutoff was completed and opened to traffic during April. Work on several improvement projects in the cities of Colon and Panama, and in the Canal Zone, was carried on.

The usual work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 772,671,500 gallons.

DREDGING DIVISION.

The general movement along the waterfront of west Culebra slide continued throughout the month with an average movement of 0.7 foot toward the Canal between stations 1778-00 and 1792-00 W., and 0.3 foot southward between stations 1778-00 and 1783-00 W. A dredge worked 14 days on east and west Culebra slides removing 24,450 cubic yards. A small break occurred at station 1870-00 E. during the month. There was no interference to shipping on account of slides during the month.

A suction dredge worked from the 1st to 28th in the Folks River borrow pits "Y" and "Z," excavating a total of 164,300 cubic yards of sand, coral, and blue clay, completing the fill on the 28th. This material was pumped to the Colon fill with the assistance of a relay pump barge through an average pipe line length from dredge to relay of 1,615 feet and from the relay to the dump of 5,037 feet, a total of 6,652

feet. The total amount of material removed from the borrow pits to date is 778,100 cubic yards of which 489,100 cubic yards remained in place, giving a runoff of 37.9 per cent. The area of completed fill is 37 acres.

The total excavation during April, 1931, was 1,357,370 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
Work excavation:			
Canal prism, Gatun Lake—			
Project No. 4.....	8,450	33,800	42,250
Maintenance.....	10,850	1,450	12,300
Canal prism, Gaillard Cut—			
Project No. 3.....	600	5,450	6,050
Project No. 4.....	1,250	4,400	5,650
Project No. 5.....	9,450	32,650	42,100
Maintenance.....	10,700	800	11,500
East and west Culebra slides.....	4,900	19,550	24,450
Canal prism, Pacific entrance—			
Project No. 1.....	223,250		223,250
Maintenance.....	491,650		491,650
Balboa inner harbor—			
Maintenance.....	301,400		301,400
Plant excavation:			
Colon fill.....	164,300		164,300
Auxiliary (M. S. Lochmonar).....	15,750	15,700	31,450
Chame sand service.....	1,020		1,020
Total.....	1,243,570	113,800	1,357,370

The ferry operating at the north end of Pedro Miguel locks functioned 30 days during the month. One thousand three hundred and thirty (1,330) single trips were made, and 234 Panama Canal, 1,507 U. S. Army, and 8,622 other vehicles, a total of 10,365, were ferried across the Canal. This is the largest number of vehicles transported during any month since the operation of the ferry was assumed by The Panama Canal, on October 8, 1927.

MADDEN DAM PROJECT.

The area above the dam site which was cleared and grubbed in order to determine the cost of such work was surveyed and was found to comprise 104.5 acres. The field work of the survey for the upper Pequeni River and Boqueron River flood warning telephone extensions was completed during the month. One station site on the Boqueron River, and two alternative sites on the Pequeni River, each of about 5.7 acres, were monumented and mapped. An alternative station site on the Chagres River was also located, monumented, and mapped. Reports were received from Miraflores laboratory on tests of several tentative mixes of concrete suggested by the Reclamation Bureau. Studies were completed on water supply, sewer system, garbage disposal and electric distribution system for Madden Dam camp. Work of a miscellaneous nature, consisting of surveying, seepage investigations, geological investigations, etc., was continued during the month.

Considerable data were forwarded to the Designing Engineer who is in Denver in consultation with the United States Bureau of Reclamation. This data consisted of rainfall information for Alhajuella, information relative to permanent upper river gauging stations, temperatures of material, air, and water, etc., etc.

The erection of quarters for the Government inspection force was authorized, and the site cleared and rubbish burned. An 8-foot gravel road was built, service roads and building locations were staked out for five cottages, one bachelor quarters, and one mess hall and kitchen.

The concrete footings for the transmission towers, with the exception of the last tower at Alhajuella, were completed. Clearing of the right-of-way was finished, trails and roads for the transportation of steel to the tower sites were completed, and everything was in readiness for the steel, the first shipment of which was scheduled to arrive on May 8.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on April 30, 1931, was 24,057, composed of 8,134 Americans, 2,864 of whom were men, 2,493 women, and 2,777 children; 174 Europeans, 83 of whom were men, 31 women, and 60 children; and 15,749 West Indians, 4,323 of whom were men, 2,820 women, and 8,606 children. The total number of persons in quarters on April 30, 1930, was 22,815.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of April 15, 1931, with a comparison of the working force for the preceding month and for April, 1930:

	Total employees.		As of April 15, 1931.		
	April, 1930.	March, 1931.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	153	123	56	64	120
Electrical.....	374	402	170	211	381
Municipal Engineering.....	899	1,225	95	901	996
Lock Operation.....	979	1,925	256	810	1,066
Dredging.....	1,275	1,197	201	996	1,197
Madden Project.....	1,068	402	21	350	371
Mechanical.....	1,417	1,336	470	867	1,337
Marine.....	903	866	196	632	828
Fortifications.....	296	279	19	140	159
Total.....	7,364	7,755	1,484	4,971	6,455
Supply Department:					
Quartermaster.....	2,354	1,805	203	1,547	1,750
Commissary.....	1,554	1,720	238	1,303	1,541
Cattle Industry—Plantations.....	100	216	2	177	179
Hotel Tivoli.....	130	124	8	116	124
Hotel Washington.....	117	108	8	100	108
Transportation.....	338	322	71	238	309
Total.....	4,593	4,295	530	3,481	4,011
Accounting Department.....	209	211	203	6	209
Health Department.....	1,168	1,149	287	825	1,112
Executive Department.....	851	886	551	334	885
Total.....	2,228	2,246	1,041	1,165	2,206
Panama Railroad Company:					
Superintendent.....	348	301	45	246	291
Transportation.....	184	194	61	123	184
Receiving and Forwarding Agency.....	1,427	1,312	80	1,408	1,488
Coaling stations.....	345	282	41	204	245
Total.....	2,304	2,089	227	1,981	2,208
Grand total, April, 1930.....	16,489				
Grand total, March, 1931.....		16,385			
Grand total, April, 1931.....			3,282	11,598	14,880

Additions to the gold force on the Isthmus in April were as follows: Employed in the United States, 4; employed on the Isthmus, 6; reemployed on the Isthmus, 3; total, 13. Separations from the gold force totaled 67, as follows: Resigned, 8; discharged, 56; retired, 2; died, 1. At the end of the month there were on file 825 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 140 deaths occurred during the month of April, 1931, among the population of the Canal Zone, and the cities of Panama and Colon (total population 143,636), which is equivalent to an annual death rate of 11.70 per 1,000 population. The leading causes of death were: Tuberculosis (various organs), 24; pneumonia (broncho and lobar), 20; organic diseases of the heart, 11; nephritis (acute and chronic), 7; and diarrhea and enteritis, 6. There was 1 death from typhoid fever and 1 from leprosy. There were 24 deaths among nonresidents, which are not included in the above statistics.

There were 296 live births and 9 stillbirths reported during the month. Including stillbirths, this equivalent to an annual birth rate of 25.48. Deaths among children under 1 year of age numbered 24, giving an infant mortality rate based on the number of live births reported, of 81.08.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon was 102, of whom 15 were employees (7 white and 8 colored), 7 were members of employees' families (all colored), 9 were Canal Zone agriculturists, 36 were other civilian nonemployees, and 35 were Army and Navy personnel. Of the 22 employees and members of employees' families, 20 were probably infected outside

our sanitized areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick.

There were 3 deaths from malaria among residents, 1 an American soldier, and 2 children, 1 a colored child living in a Canal Zone rural district, and 1 a Panamanian, living in the City of Panama.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$176,286.86, of which \$152,424.09 was for the Department of Operation and Maintenance, and \$23,862.77 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material, amounted to \$35,489.79.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of March, 1931, as compared with March, 1930, with the figures for the first 9 months of the current fiscal year as compared with the same period in the fiscal year 1930.

It is impossible to submit figures for the month of April at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	March, 1930.	March, 1931.	To end of March.	
			Last year.	This year.
Tolls.....	\$2,260,044.42	\$1,964,240.30	\$20,580,209.14	\$18,885,203.40
Other receipts.....	495,619.70	363,241.37	3,381,400.78	3,156,959.72
Total transit revenues.....	2,755,664.12	2,327,481.67	23,961,609.92	22,042,163.12
Total transit expenses.....	1,252,197.42	1,209,040.80	10,024,949.68	10,552,157.18
Net transit revenues.....	1,503,466.70	1,118,440.87	13,936,660.24	11,490,005.94
Three per cent capital charge.....	622,421.62	625,761.56	5,591,231.42	5,634,483.21
Transit surplus.....	881,045.08	492,679.31	8,345,428.82	5,855,522.73
Business revenues.....	1,731,202.23	1,490,480.51	15,053,179.21	13,504,434.39
Business expenses.....	1,615,460.82	1,437,946.84	14,196,556.08	12,895,889.93
Net business revenues.....	115,741.41	52,533.67	856,623.13	608,544.46
Three per cent capital charge.....	63,651.02	66,155.28	603,367.53	613,017.89
Business surplus.....	52,090.39	(13,621.61)	253,255.60	(4,473.43)
Combined revenues.....	4,486,866.35	3,817,962.18	39,014,789.13	35,546,597.51
Combined expenses.....	2,867,658.24	2,646,987.64	24,221,505.76	23,448,047.11
Net revenues.....	1,619,208.11	1,170,974.54	14,793,283.37	12,098,550.40
Three per cent capital charge.....	686,072.64	691,916.84	6,194,598.95	6,247,501.10
Combined surplus.....	933,135.47	479,057.70	8,598,684.42	5,851,049.30

() Indicates deficit.

Respectfully,

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending May 23, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cauca.....	National Navigation Co.....	May 18.....	May 18.....	55	8
La Plata Maru.....	Nippon Yusen Kaisha.....	May 18.....	May 18.....	.....	.....
Toba Maru.....	Nippon Yusen Kaisha.....	May 18.....	May 19.....	95	.....
Guatemala.....	Panama Mail S. S. Co.....	May 20.....	May 21.....	32	2
La Perla.....	United Fruit Co.....	May 20.....	May 21.....	560	70
Patrick Henry.....	Tampa Intercocean S. S. Co.....	May 20.....	May 21.....	112	.....
Sveadrott.....	Knutsen Line.....	May 21.....	.....	2,872	.....
President Jackson.....	Dollar Line.....	May 22.....	May 22.....	.....	5
Theodore Roosevelt.....	Fred Olsen & Co.....	May 22.....	May 22.....	.....	1
Santa Inez.....	Grace Line.....	May 23.....	May 23.....	41	5

New York State Training Ship Transits Canal.

The training ship *Newport* of the State of New York arrived at Cristobal on May 21, 1931, with 122 cadets aboard in training for the merchant marine service. The vessel transited the Canal on the 23d, and on the 26th cleared from Balboa en route to Bremerton, Wash. The *Newport*, formerly a gunboat of the United States Navy, was loaned by the Government to the State of New York several years ago to be used as a training ship for merchant marine officers. She is 204 feet long, 36 feet beam, and of 1,010 tons displacement. She is in command of Capt. J. H. Tomb, U. S. N., retired, a former Marine Superintendent of The Panama Canal.

Upon arrival at Bremerton the *Newport* will be replaced, for this service, by the U. S. S. *Procyon*, a much larger and more modern vessel, and the *Newport* will be returned to the Navy for decommissioning and sale. The *Procyon* was, until recently, flagship of the Fleet Base Force based at San Pedro, Calif.

The *Procyon* is 390 feet long (401 feet overall), has a beam of 54 feet and her mean draft is 24 feet 5 inches. She is a sister ship of the U. S. S. *Antares* and displaces 11,450 tons; is an oil burner and is fitted with Curtis electric-gearred turbines, giving her a speed of 11½ knots. The *Procyon* was formerly the S. S. *Shaume* and was taken over from the Shipping Board by the Navy in 1921.

Cargo Declarations.

THE PANAMA CANAL, DEPARTMENT OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., May 25, 1931.

TO AGENTS AND OWNERS OF VESSELS USING THE PANAMA CANAL:

1. Among the documents required by Regulation 12.1 (*Rules and Regulations Governing the Navigation of the Panama Canal*) to be ready for immediate delivery to the boarding party upon being received at the port of entry, is a cargo declaration.

2. The information contained in the cargo declaration is extremely important for statistical purposes and a report of commodities transiting the Canal, and the directions in which such commodities are moving is prepared from data contained in these cargo declarations.

3. It has come to the attention of this office that not infrequently cargo declarations are not ready for delivery upon arrival of vessels at a terminal port, and in order to eliminate failure to obtain such declarations in the future, the following procedure will be followed in the few cases where such declarations are not ready when the vessel is boarded:

(a) Boarding officer at port of entry will notify Port Captain by means of notation on the information sheet that the cargo declaration has not been furnished.

(b) Port Captain will then notify pilot of the vessel at Miraflores or Gatun Locks, as the case may be, to take up the cargo declaration before he leaves the vessel. Upon his return, the pilot will deliver the cargo declaration to the Port Captain's office which, in turn, will deliver same to the Chief Customs Inspector.

(c) In accordance with Rule 13, clearance will not be issued until after "all documents and statistical data required by the Canal authorities in regard to vessel, cargo, and passengers have been furnished."

C. H. WOODWARD,
Marine Superintendent.

APPROVED:

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, May 23, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
M. F. Elliott ¹	16	20 55	17	6 20	17	13 17	17	14 35	American	Standard Shipping Co.	425 0	57 2	19 0	Charleston, S. C.	San Francisco, Cal.	Ballast	7,481	4,946	
Sydney M.	17	4 00	17	7 00	17	13 59	17	15 10	American	Munson, McCor'k Line	401 0	53 2	23 0	New York, N. Y.	Tacoma, Wash.	(⁹) Steel products	5,032	7,082	
Hauptmann	17	7 00	17	7 45	17	14 43	17	19 30	American	Argonaut S. S. Co.	434 0	57 7	27 0	Mobile, Ala.	Guayaquil, Ecuador	General	9,274	5,841	
Lancaster	9	17 45	17	9 30	17	16 50	17	17 45	German	Roland S. S. Line	216 6	32 9	12 0	Cristobal, C. Z.	San Francisco, Cal.	General	238	1,132	
Manizales	17	12 30	17	12 40	17	20 30	18	1 38	British	Inter. Petroleum Co.	565 0	75 6	25 0	Hatifax, N. S.	Talara, Peru	Ballast	16,780	9,885	
C. O.	17	12 30	17	12 40	17	20 30	18	1 38	British	Inter. Petroleum Co.	565 0	75 6	25 0	Hatifax, N. S.	Talara, Peru	Ballast	16,780	9,885	
Stullman ²	17	12 30	17	12 40	17	20 30	18	1 38	British	Inter. Petroleum Co.	565 0	75 6	25 0	Hatifax, N. S.	Talara, Peru	Ballast	16,780	9,885	
Tuscaloosa	17	12 30	17	12 40	17	20 30	18	1 38	British	Inter. Petroleum Co.	565 0	75 6	25 0	Hatifax, N. S.	Talara, Peru	Ballast	16,780	9,885	
City	17	14 45	17	14 55	17	21 45	17	23 03	American	Isthmian S. S. Lines	424 2	56 2	22 0	Baltimore, Md.	Vancouver, B. C.	Steel, general	5,589	7,611	
Fosna ²	17	17 00	17	18 00	18	9 34	18	10 21	Norwegian	Anglo-Saxon Pet. Co.	451 1	59 2	18 0	Falmouth, England	Los Angeles, Calif.	Ballast	8,318	5,657	
Elizabeth	17	18 50	17	19 10	18	10 39	18	11 34	American	Philippine S. S. Corp.	391 9	51 2	22 0	New York, N. Y.	Los Angeles, Calif.	Ballast	5,410	3,804	
Kellogg ²	17	14 50	17	14 50	18	10 39	18	11 34	American	Philippine S. S. Corp.	391 9	51 2	22 0	New York, N. Y.	Los Angeles, Calif.	Ballast	5,410	3,804	
LaPlata Maru ²	17	14 50	17	14 50	18	10 39	18	11 34	American	Philippine S. S. Corp.	391 9	51 2	22 0	New York, N. Y.	Los Angeles, Calif.	Ballast	5,410	3,804	
Sunamvik ²	17	9 05	18	6 42	18	15 03	18	16 35	Swedish	Isfrantsen Moller	390 0	54 6	20 10	Baltimore, Md.	Saigon, China	General	5,763	6,775	
Brimanger ²	17	13 10	18	8 30	18	15 26	18	16 35	Norwegian	Westfal, Larsen & Co.	398 0	54 9	19 5	Buenos Aires, Arg.	Vancouver, B. C.	Coffee, bones	4,033	6,853	
Buenaventura	17	10 55	18	10 05	18	18 16	18	20 55	American	Panama R. S. S. Line	251 0	43 0	16 0	New York, N. Y.	Guayaquil, Ecuador	General	480	2,873	
Caeca ²	17	10 55	18	10 05	18	18 16	18	20 55	American	National Navigation Co.	107 0	22 0	9 0	Cristobal, C. Z.	Buenaventura, Col.	General	33	262	
Sacramento	14	22 30	18	14 20	18	14 20	18	14 20	American	U. S. Navy	410 5	40 0	15 7	Nicaragua	Gatun, C. Z.	Ballast	2,178	6,624	
Pacific Fir	19	5 15	19	7 15	19	14 10	19	15 55	American	Dimon S. S. Corp.	210 0	54 0	15 7	Philadelphia, Pa.	Seattle, Wash.	General	3,801	11,721	
Damsterdijk ²	19	1 35	19	12 00	19	18 23	19	19 55	Dutch	Holland-America Line	490 0	64 6	21 0	Rotterdam, Holland	Vancouver, B. C.	General	3,801	11,721	
Nebraska	19	17 45	19	20 20	20	11 29	20	12 20	American	Amer.-Hawaii Line	471 0	59 0	17 8	Boston, Mass.	Seattle, Wash.	General	2,321	9,032	
Guatemala	18	20 45	20	6 00	20	13 22	20	15 00	American	Panama Mail S. S. Co.	360 2	51 6	23 3	New York, N. Y.	San Francisco, Cal.	General	2,780	5,776	
Arta	19	16 35	20	6 10	20	13 41	20	15 45	German	North German Lloyd	331 0	46 0	18 10	Hamburg, Germany	San Antonio, Chile	General	1,950	3,529	
Susan V.	19	20 30	20	7 00	20	15 06	20	16 20	American	Luckenbach Line	434 3	57 7	21 0	Boston, Mass.	Seattle, Wash.	General	3,920	7,947	
Luckenbach	19	20 30	20	7 00	20	15 06	20	16 20	American	Luckenbach Line	434 3	57 7	21 0	Boston, Mass.	Seattle, Wash.	General	3,920	7,947	
Norfolk	19	21 00	20	8 10	20	16 22	20	17 15	Danish	Canadian Transp. Co.	380 0	54 0	22 0	Pt. of Spain, Trin.	Vancouver, B. C.	Sugar	3,750	6,252	
Arkansas	19	21 00	20	13 00	20	19 55	20	21 00	French	French Line	448 8	53 2	17 6	Ha've, France	Cerrol, Chile	Iron, general	2,646	7,678	
Feire ²	20	10 00	20	13 07	20	22 38	20	23 30	Italian	Nav. Libera Triestina	436 6	55 0	18 6	Trieste, Italy	Vancouver, B. C.	General	1,303	7,795	
Recl ²	19	14 30	20	8 00	20	16 07	20	17 00	Panamaian	Trans. Elliott	62 0	17 0		Cristobal, C. Z.	Balboa, C. Z.	Ballast	46	21	
Jean ²	20	15 00	21	6 05	21	13 11	21	14 10	British	Pacific Steam Nav. Co.	550 0	63 0	27 4	Cristobal, C. Z.	Gatun, C. Z.	Ballast	1,778	17,146	
Orinda	20	15 00	21	6 05	21	13 11	21	14 10	British	Pacific Steam Nav. Co.	550 0	63 0	27 4	Cristobal, C. Z.	Gatun, C. Z.	Ballast	1,778	17,146	
Planter	20	15 30	21	6 35	21	14 40	21	15 35	British	T. & J. Harrison	429 0	54 9	18 8	Liverpool, England	Vancouver, B. C.	General	6,538	14,621	
Wirral	21	6 35	21	7 20	21	14 29	21	17 05	British	Amer.-Australian Line	385 0	52 0	19 0	Manchester, Eng.	Fremantle, Ausc. th	General	2,472	5,131	
Somersby	21	6 05	21	8 30	21	16 29	21	17 45	British	Sir. R. Roper & Co.	421 2	54 3	16 0	N. Shields, Eng.	Vancouver, B. C.	Ballast	6,362	8,623	
India ²	21	7 30	21	9 30	21	17 56	21	19 30	Danish	East Asiatic Co.	470 3	63 7	18 4	Copenhagen, Den.	Vancouver, B. C.	Ballast	11,157	8,830	
San Simeon	21	5 45	21	11 14	21	17 50	21	19 23	American	States S. S. Co.	410 5	64 3	19 0	New York, N. Y.	Tacoma, Wash.	General	2,197	6,573	
Winnipeg ²	20	23 15	21	13 00	21	19 09	21	20 30	French	French Line	472 0	59 3	22 3	Ha've, France	Vancouver, B. C.	Iron, general	1,512	10,619	

¹ Tanker. ² Motor ship. ³ Gunboat. ⁴ Motor boat. ⁵ Launch. ⁶ Steel, lubricating oil, and general.

President Jackson	21	16.25	22	6.05	22	12.54	22	21.30	American	Dollar Line	517.0	72.2	25.0	New York, N. Y.	Manila, P. I.	General	1,136	15,226	10,427
Danwood	21	15.40	22	6.15	22	13.17	22	14.45	Norwegian	J. J. Moore & Co.	437.6	60.2	12.6	Gothenburg, Swed	Los Angeles, Calif	General	6,913	4,804	4,804
Balboa	21	17.35	22	7.05	22	14.31	22	16.25	Swedish	Johnson Line	426.0	55.0	19.11	Stockholm, Sweden	San Francisco, Cal.	Ballast, coffee	2,969	7,480	5,533
Theodore Roosevelt	21	22.50	22	7.25	22	15.44	22	17.10	Norwegian	Fred Olsen & Co.	425.5	55.2	20.8	Antwerp, Belgium	Los Angeles, Calif	Iron, general	5,126	7,933	5,637
Silverwalth	21	22.55	22	8.20	22	15.53	22	17.15	British	Silver Line	455.0	62.6	21.0	New York, N. Y.	Sourabaya, Ind.	General	4,811	9,576	6,618
Tamahua	22	00.10	22	8.25	22	16.56	22	18.05	American	Ritchfield Oil Co.	500.0	7.9	21.0	New York, N. Y.	Los Angeles, Calif	Ballast	11,667	8,542	8,542
Foylebark	22	16.30	22	16.35	22	22.52	23	7.30	British	Bark Line	425.8	37.3	15.9	Baltimore, Md	Shanghai, China	Steel, general	1,822	7,907	5,246
Minerit	22	20.05	22	20.35	22	9.45	23	11.30	British	Children Nitrate Prod.	405.0	32.0	18.0	S. Shields, England	Antogastaca, Chile	Ballast	6,172	4,702	4,702
Newport	21	12.00	22	6.10	22	13.31	22	11.05	American	New York Nitrate	204.0	36.0	14.9	New York, N. Y.	Bremerton, Wash.	Ballast	150	1,633	1,041
Durazzo	16	17.30	23	6.08	23	13.25	23	21.50	German	Hamburg-American Line	227.5	34.4	13.8	Cristobal, C. Z.	Vancouver, B. C.	General	7,521	5,852	5,852
Gothenburg	23	00.10	23	6.15	23	13.46	24	18.26	British	Blue Star Line	420.5	54.7	18.3	Newcastle, England	Vancouver, B. C.	Ballast	7,521	5,852	5,852
Nordkap	23	4.35	23	7.25	23	15.26	23	16.35	Danish	Canadian Transport Co.	384.7	54.3	15.3	Norfolk, Va	Los Angeles, Calif	Ballast	6,515	4,756	4,756
Thurland	23	6.35	23	7.30	23	16.31	23	22.20	British	Barber S. S. Line	464.6	60.0	21.4	New York, N. Y.	Dairen, China	General	4,009	8,805	6,035
Castle	23	9.45	23	9.55	23	16.54	23	22.05	Swedish	Ore S. S. Corp	561.0	72.0	22.0	New York, N. Y.	Cruz Grande, Chile	Ballast	15,500	4,496	4,496
Amerikaland	23	6.35	23	11.00	23	18.41	24	00.15	Belgian	Int. de Comm. et d'Arm.	400.5	52.0	15.0	Barry, England	Iquique, Chile	Ballast	6,617	4,792	4,792
Ani	23	12.10	23	12.15	23	18.58	23	00.14	Norwegian	J. L. Mowinkel Rederi	377.0	52.2	13.0	Gothenburg, Swed.	Los Angeles, Calif	Ballast	5,761	4,322	4,322
Heina	23	12.10	23	12.15	23	18.58	23	00.14	Norwegian	Panama Mail S. S. Co.	261.0	40.0	14.0	Cristobal, C. Z.	San Francisco, Cal.	General	655	2,352	1,549
Cornito	22	16.35	23	14.45	23	21.54	24	00.15	American	Grace Line	370.0	53.2	22.3	New York, N. Y.	Valparaiso, Chile	General	3,227	6,255	4,016
Santa Inez	22	17.10	23	15.00	23	21.24	24	1.25	American	Grace Line	370.0	53.2	22.3	New York, N. Y.	Valparaiso, Chile	General	3,227	6,255	4,016
Ruahine	23	15.52	23	16.00	23	22.30	24	17.41	British	N. Z. Shipping Co.	480.0	60.0	29.0	London, England	Auckland, N. Z.	General	5,450	11,443	8,469
Cingalese	23	19.35	23	19.50	24	9.01	24	10.49	British	Furness, Withy & Co.	441.0	60.0	20.0	New York, N. Y.	Manila, P. I.	General	2,676		

7 Training ship.

1 Tanker.

THROUGH THE CANAL - PACIFIC TO ATLANTIC.

Selma City	17	1.23	17	6.16	17	13.25	17	13.25	American	Isthmian S. S. Lines	424.2	56.2	27.0	Port Allen, T. H.	East coast, U. S. A.	Sugar	8,416	7,611	5,450
Skotaas	16	16.00	17	6.55	17	14.25	17	17.05	Norwegian	Anglo-Saxon Pet. Co.	451.1	59.2	27.0	Los Angeles, Calif	Land's End, Eng ¹	Gasoline	10,725	8,323	5,768
President McKinley	17	6.20	17	7.26	17	15.10	17	20.25	American	Dollar Line	516.5	72.2	27.3	Manila, P. I.	New York, N. Y.	General	3,022	15,286	10,498
Chilore	18	3.00	18	6.18	18	15.30	18	15.30	American	Ore S. S. Corp.	349.6	72.2	34.0	Cruz Grande, Chile	Baltimore, Md	Iron ore	21,250	14,538	4,020
Missourian	17	17.45	18	6.48	18	14.45	18	14.45	American	Amer-Hawaiian Line	445.1	59.8	24.0	San Francisco, Cal.	Boston, Mass	General	6,656	8,567	6,020
Ansigr	18	1.40	18	7.25	18	16.24	18	20.20	German	North German Lloyd	383.1	54.3	27.0	Valparaiso, Chile	Bremen, Germany	General	8,000	6,542	4,532
Calgarolite	18	8.00	18	9.07	18	18.30	18	18.30	British	Imperial Oil Co.	521.5	70.4	31.5	Talara, Peru	Montreal, Canada	Crude oil	16,400	12,339	7,717
Resolute	18	6.15	18	12.11	18	18.50	18	19.40	German	Hamburg-American Line	590.4	72.2	27.4	New York, N. Y.	New York, N. Y.	Passengers	20,899	12,552	12,552
El Cyervo	18	15.45	19	19.41	19	11.30	19	11.30	British	Anglo-Ecuador. Oil Co.	607.0	52.2	26.4	La Libertad, Ecuador	Philadelphia, Pa.	Crude oil	7,041	6,046	4,326
Real	19	00.45	19	6.10	19	14.39	20	8.00	Panamanian	Elsas Elliott	28.0	18.0		Bahoa, C. Z.	Cristobal, C. Z.	Bananas	28	46	22
Caldas	19	00.45	19	7.01	19	15.15	20	8.00	Colombian	United Fruit Co.	116.0	21.0	9.6	Buenaventura, Col.	Cristobal, C. Z.	Wheat	133	211	124
Treacrell	19	6.00	19	7.14	19	14.40	19	15.30	British	Hain S. S. Co.	400.0	52.3	25.0	Vancouver, B. C.	Oran	General	7,220	5,790	4,067
Toba Maru	18	23.30	19	13.44	19	20.35	19	20.35	Japanese	Nippon Yusen Kaisha.	445.0	51.0	24.1	Iloilo, P. I.	New York, N. Y.	General	6,764	8,038	5,743
Janeta	19	13.55	19	14.32	19	22.25	20	22.25	British	Mackay & McIntyre	402.4	55.0	25.3	Vancouver, B. C.	Antwerp, Belgium	General	8,329	6,134	4,335
Walter A. Luckenbach	10	20.15	20	7.00	20	14.05	20	14.05	American	Luckenbach Line	446.5	55.1	29.4	Portland, Oreg	Boston, Mass.	Lumber, general	7,193	8,785	6,567
Pacific	19	23.50	20	7.22	20	14.45	20	14.45	British	Furness, Withy & Co.	435.9	60.7	28.4	Vancouver, B. C.	Glasgow, Scotland	General	8,989	9,633	6,998
Kuretake Maru	20	7.50	20	8.42	20	16.10	20	19.05	Japanese	Tatsumi Kisen Kaisha	404.9	53.0	23.0	Nasegben	U. S. Atlantic port.	Sugar	6,800		
Mobile City	20	14.00	20	14.35	20	22.50	20	22.50	American	Isthmian S. S. Lines	395.5	55.0	27.0	Port Alice, B. C.	Providence, R. I.	Lumber, pulp	7,430	7,330	5,241
Nosa King	21	3.18	21	6.59	21	14.50	21	22.40	American	N. O. & S. A. S. S. Co.	324.0	46.2	22.0	Valparaiso, Chile	New Orleans, La.	Nitrates, coffee	4,062	3,978	2,560

* For orders.

9 Around the world.

1 Tanker.

Motor ship.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Days.	Hour.	Days.	Hour.	Days.	Hour.	Days.	Hour.							Nature.	Tons.	Gross.	Net.
Nelson	20	19 55	21	7 13	21	16 05	21	16 05	American	Charles Nelson Co.	380 3	53 1	24 2	Seattle, Wash.	New York, N. Y.	Lumber, general	6,295	5,657
Traveler	21	6 30	21	7 38	21	15 10	21	21 05	American	Panama R. R. S. S. Line	251 0	43 6	17 4	Guayaquil, Ecuador	New York, N. Y.	General	1,275	2,874
Guayaquil	21	00 35	21	8 29	21	16 30	21	16 30	American	J. B. Berry Sons Co.	365 0	51 0	25 4	Los Angeles, Calif.	Tiverton, R. I.	Gasoline	6,473	5,174
J. W. Van Dyke	21	9 00	21	10 58	21	18 35	21	22 10	British	Canadian Wheat Corp.	390 0	55 5	24 0	Prince Rupert, B. C.	Hayre, France	Wheat	4,920	5,899
Troutpon	21	6 02	21	11 49	21	19 20	21	19 20	British	Comard Line	601 3	73 7	28 0	New York, N. Y.	New York, N. Y.	Passengers	22	513
Francisco	21	11 30	21	12 29	21	19 55	24	5 55	Dutch	Royal Neth. S. S. Co.	202 9	33 1	14 0	Buenaventura, Col.	Cristobal, C. Z.	General	680	1,182
Barait	21	12 00	21	13 04	21	21 25	23	25	Japanese	Kokusa Kisen Kaisha	425 0	53 8	26 5	Manila, P. I.	New York, N. Y.	Sugar, hemp	8,750	6,899
Tamaho Maru	20	21 55	21	14 10	21	21 28	22	12 30	American	Tampa InterOcean Co.	439 6	60 0	24 0	Manila, P. I.	New Orleans, La.	Sugar, hemp	10,323	8,987
Patrick Henry	20	15 40	21	16 21	22	12 45	22	12 45	British	R. Chapman & Son	412 6	55 5	28 0	Vancouver, B. C.	London, England	Wheat, general	9,944	8,811
Koranton	21	16 10	21	17 15	22	13 15	22	13 15	American	Hamburg-American Line	432 3	59 1	26 0	Vancouver, B. C.	Hamburg, Germany	Wheat, general	7,541	8,454
San Francisco	21	18 50	22	6 12	22	13 15	22	13 15	German	Hamburg-American Line	432 3	59 1	26 0	Vancouver, B. C.	Hamburg, Germany	Wheat, general	7,541	8,454
Point Palmas	21	19 25	22	7 09	22	15 00	22	15 55	British	Swayne & Hoyt	440 0	57 5	26 0	Portland, Ore.	Mobile, Ala.	Sugar, general	2,651	5,708
Goolistan	22	00 15	22	7 12	22	15 00	22	15 55	British	Common Brothers	440 0	57 5	26 0	Champerico, Guat.	Antwerp, Belgium	Wheat, fish	9,959	7,679
Acajutla	22	00 15	22	7 12	22	15 00	22	15 55	British	Common Brothers	440 0	57 5	26 0	Champerico, Guat.	Antwerp, Belgium	Wheat, fish	9,959	7,679
Mexican	22	4 15	22	7 41	22	15 30	22	15 30	American	Pacific Steam Nav. Co.	215 3	33 6	17 0	Tacoma, Wash.	Cristobal, C. Z.	General	1,098	1,273
Nordbo	22	5 00	22	8 30	22	16 55	22	16 55	Danish	Amer-Hawaiian Line	472 3	57 2	27 0	Tacoma, Wash.	Boston, Mass.	General	9,302	9,258
Spreewald	22	6 00	22	8 43	22	16 40	23	1 15	German	Inter. Freightng Corp.	380 0	53 5	25 2	Tocopilla, Chile	Jacksonville, Fla.	Nitrates, wax	7,960	6,190
Elg	22	12 30	22	13 16	22	20 10	22	20 10	Norwegian	Hamburg-American Line	399 4	54 2	26 0	Valparaiso, Chile	Hamburg, Germany	Nitrates, cotton	7,574	6,791
Raina del Pacifico	22	8 40	22	14 31	22	22 40	23	00 35	British	Isbrandtsen, Moller Co.	357 4	51 2	24 0	Hingaran, P. I.	Providence, R. I.	General	6,263	5,170
Fernunhor	22	16 30	22	17 15	23	11 05	23	11 05	Norwegian	Pacific Steam Nav. Co.	550 1	76 3	30 0	Talcahuano, Chile	Liverpool, England	General	5,817	18,871
San Bernardino	22	19 55	23	6 00	23	13 45	23	16 20	American	Fearnley & Eger	381 4	43 8	25 3	Iloilo, P. I.	E. coast, U. S. A.	Sugar	7,450	6,290
Texmar	22	23 00	23	6 49	23	15 40	23	15 40	American	States S. S. Co.	410 5	54 2	25 3	Portland, Ore.	Philadelphia, Pa.	Lumber, general	7,098	6,755
Leua Lucke	23	1 00	23	7 13	23	14 45	23	14 45	American	Calmar Line	410 0	54 3	25 0	Portland, Ore.	New York, N. Y.	Lumber	7,589	6,567
Ferrelne	23	7 30	23	8 05	23	16 00	23	16 00	Norwegian	Luckenbach Line	475 0	53 8	21 0	Portland, Ore.	Mobile, Ala.	General	4,113	7,217
Robert E.	23	11 55	23	12 45	23	19 55			German	Fearnley & Eger	376 0	53 8	26 0	Vladiv'k, U. S. S. R.	Denmark	Soya beans	7,300	6,264
Hopkins	23	13 15	23	13 56	23	21 10	23	00 01	American	Roland Line	216 5	32 0	13 3	Guayaquil, Ecuador	Cristobal, C. Z.	General	755	1,105
										Tidewater Oil Co.	424 4	58 2	26 0	San Francisco, Cal.	New York, N. Y.	Gasoline	9,189	7,333

* Tanker.

¹¹ Motor ship.

¹² Around the world.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 25, 1931.

No. 888.

Caribbean Sea, buoy adrift. The S.S. *Binbang* reports the following by radio:
May 24, 1931, at 1 p. m., passed large whistle or light buoy adrift. Lat. 15° 23' N., long. 81° 23' W.
Dangerous to navigation.

Gulf of Panama, spar buoy adrift. The S.S. *Syra* reports the following by radio:
May 24, at 1 p. m., passed drifting red spar buoy. Approximate position, long. 8° 4' N., lat. 79° 46' W.

The S. S. *Pennsylvania* also sighted this buoy at 7.52 a. m., May 25, about 32 miles south of Bona Island.

H. BURGESS,
Governor.

**Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Cristobal, C. Z., for Week Ending May 23, 1931.**

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Bodegraven	Royal Netherlands S. S. Co.		May 17		345
Magdalena	Hamburg-American Line		May 17		1,074
President McKinley	Dollar Line	May 17	May 17	372	
Iriona	United Fruit Co.	May 17	May 17	197	238
Brimanger	Wesfal, Larsen & Co.	May 17	May 18	(¹)	45
Washington	French Line	May 17	May 18	214	560
Sunnanvik	Isbrandtsen Moller	May 17	May 18	102	(²)
Buenaventura	Panama R. R. S. S. Line	May 17	May 18	1,053	48
Esfuerzo	J. Amussen	May 17	May 20	2,600	(²)
Cauca	National Navigation Co.		May 18		283½
Ausgr	North German Lloyd	May 18	May 18	40	(²)
Colombia	Royal Netherlands S. S. Co.	May 18	May 18	59	22
Guatemala	Panama Mail S. S. Co.	May 18	May 20	175	1,184
Damsterdijk	Holland-America Line	May 19	May 19	214	166
Zacapa	United Fruit Co.	May 19	May 20	27	686
Arkansas	French Line	May 19	May 20	102	245
Arta	North German Lloyd	May 19	May 20	46	44
Caldas	National Navigation Co.	May 19		147	
Feltre	Navigazione Libera Triestina	May 20	May 20	63	(²)
Winnipeg	French Line	May 20	May 21	127	125
Pastores	United Fruit Co.	May 20	May 21	318	225
Tela	United Fruit Co.	May 20	May 21	707	43
Orduna	Pacific Steam Navigation Co.	May 20	May 21	50	115
Planter	Leyland S. S. Line	May 20	May 21	286	(²)
Ancon	Panama R. R. S. S. Line	May 20		3,506	
Juan Sebastian Eleano	Spanish S. S. Line		May 21		313
San Simeon	States S. S. Co.	May 21	May 21	104	(²)
Balboa	Johnson S. S. Line	May 21	May 22	145	(²)
Nosa King	N. O. & S. A. S. S. Co.	May 21	May 21	(¹)	163
Baralt	Royal Netherlands S. S. Co.	May 21		65	
Colombia	Royal Netherlands S. S. Co.	May 21		25	(²)
Guayaquil	Panama R. R. S. S. Line	May 21	May 21	226	226
Patrick Henry	Tampa InterOcean S. S. Co.	May 21	May 22	137	(²)
Baracoa	Colombian S. S. Line	May 21	May 22	47	7
Ulua	United Fruit Co.	May 22	May 22	196	116
San Francisco	Hamburg-American Line	May 22	May 22	22	68
Ariguani	Elders & Fyffes, Ltd.	May 22	May 22	½	(²)
Santa Inez	Grace Line	May 22	May 23	318	843
Stella Lykos	Lykes Brothers	May 22	May 23	1,169	26
Spreewald	Hamburg-American Line	May 22	May 23	102	(²)
Contessa	Standard Fruit & S. S. Co.	May 22	May 23	389	216
Acajutla	Pacific Steam Navigation Co.	May 22		1,098	
Reina del Pacifico	Pacific Steam Navigation Co.	May 22	May 23	(¹)	(²)
Eisenach	North German Lloyd	May 23		401	
Tela	United Fruit Co.	May 23	May 23	42	308
Calí	Roland Line	May 23		755	
Corinto	Panama Mail S. S. Co.	May 23			663
Durazzo	Hamburg-American Line	May 23	May 23		120

¹ No cargo discharged.² No cargo laded.³ Three cases.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

New Water Tanks Under Construction at Mount Hope.

Work has started on the construction of two steel water tanks of 1,000,000 gallons capacity each at Mount Hope for the Municipal Engineering Division as additional provision for the water requirements in the Cristobal-Colon district. The new tanks are made necessary by the increased population of the Cristobal-Colon district, particularly in the Army and Navy posts, and the need of a larger water reserve which can be called upon in the event of an emergency, such as a break in the line from Brazos Brook reservoir, a shut-down of the pumping station, electric power failure, etc.

The steel for the first of the new tanks was received on the Isthmus the early part of this month and is being erected by the Mechanical Division. The tank will be completed in July. Upon its completion the existing 500,000-gallon tank, which is in poor condition, will be destroyed, and the second 1,000,000-gallon tank will be erected on the site of the old tank.

The development will give a reserve and pressure storage of 2,000,000 gallons as compared with the existing reserve of 500,000 gallons. The tanks are to be elevated, their bottoms about 154 feet above sea level, their tops approximately 35 feet higher.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 12 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 15 years of operation.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1931 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	From New York to Cristobal.			From Cristobal to New York.		
	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
<i>Cristobal</i>	May 26.....	May 31.....	June 3.....	June 7.....	June 10.....	June 15.....
<i>Ancon</i>	June 9.....	June 14.....	June 17.....	June 21.....	June 24.....	June 29.....
<i>Cristobal</i>	June 23.....	June 28.....	July 1.....	July 5.....	July 8.....	July 13.....
<i>Ancon</i>	July 8.....	July 13.....	July 16.....	July 19.....	July 22.....	July 27.....
<i>Cristobal</i>	July 21.....	July 26.....	July 29.....	August 2.....	August 5.....	August 10.....
<i>Ancon</i>	August 4.....	August 9.....	August 12.....	August 16.....	August 19.....	August 24.....
<i>Cristobal</i>	August 18.....	August 23.....	August 26.....	August 31.....	September 3.....	September 8.....
<i>Ancon</i>	September 1.....	September 6.....	September 9.....	September 13.....	September 16.....	September 21.....
<i>Cristobal</i>	September 15.....	September 20.....	September 23.....	September 27.....	September 30.....	October 5.....
<i>Ancon</i>	September 29.....	October 4.....	October 7.....	October 11.....	October 14.....	October 19.....
<i>Cristobal</i>	October 14.....	October 19.....	October 22.....	October 25.....	October 28.....	November 2.....
<i>Ancon</i>	October 27.....	November 1.....	November 4.....	November 8.....	November 11.....	November 16.....
<i>Cristobal</i>	November 10.....	November 15.....	November 18.....	November 22.....	November 25.....	November 30.....
<i>Ancon</i>	November 24.....	November 29.....	December 2.....	December 6.....	December 9.....	December 14.....
<i>Cristobal</i>	December 8.....	December 13.....	December 16.....	December 20.....	December 23.....	December 28.....
<i>Ancon</i>	December 22.....	December 27.....	December 30.....	January 3.....	January 6.....	January 11.....

* Effective April 28th, steamers sail daylight saving time.

† Due to discontinuance of the daylight saving time, departure of S. S. *Ancon*, September 29, will be at 4 p. m. standard time.

Steamers sail at 4 p. m. from Pier 65, North River, foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

Tolls Charges for Transit of the Panama Canal.

1. Merchant vessels carrying passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity as determined by the Panama Canal Rules of Measurement \$1.20
2. Vessels in ballast, without passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity as determined by the Panama Canal Rules of Measurement72
3. Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton50
4. Army and navy transports, colliers, hospital ships, and supply ships, the vessel to be measured by the same rules as are employed in determining the net tonnage of merchant vessels, per net ton 1.20
5. Tolls may not exceed the equivalent of \$1.25 per net registered ton as determined by United States rules of measurement, nor be less than the equivalent of \$0.75 per net registered ton so determined.
6. Vessels returning from Gatun Lake or original point of entry into the Canal, without passing through the locks at the other end, are charged tolls for one passage only.
7. Vessels transiting the Panama Canal from Cristobal to Balboa and return for the sole purpose of having repairs made at the Balboa dry dock and shops will be exempt from payment of tolls, but a charge will be made for pilotage and for handling lines as provided for in the current tariff or supplements thereto.

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference.

It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

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OFFICIAL PUBLICATION OF THE PANAMA CANAL.
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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV.

Balboa Heights, C. Z., June 3, 1931.

No. 44.

Canal Traffic During May.

During the month of May, 1931, 428 commercial vessels and 10 small nonseagoing launches under 20 tons measurement transited the Canal. Tolls on the commercial vessels aggregated \$1,923,452.18, and on the launches \$44.70, or a total tolls collection of \$1,923,496.88.

The daily average of commercial vessels was 13.81, and the daily average tolls collection was \$62,046.84, as compared with an average of 15.10 transits and \$67,144.97 in tolls for the previous month, and an average of 15.45 transits and \$69,770.92 in tolls for May, 1930. The average amount of tolls paid by each of the commercial transits was \$4,494.05, as compared with \$4,515.45 for the month of May, 1930.

With respect to the number of transits of commercial vessels traffic for the past month was the lowest since November, 1926, during which month the same number of vessels, 428, were transited. The daily average number of commercial transits in May, 1931 (13.81) was the lowest since October, 1925, in which month the daily average was 13.23 transits.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 11 months of the current fiscal year, with the daily averages of transits and tolls, and the totals for the first 11 months of the fiscal years 1930 and 1929:

Month.	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July.....	488	\$2,180,511.82	15.74	\$70,339.09
August.....	465	2,080,230.42	15.00	67,104.21
September.....	458	2,057,103.58	15.26	68,570.12
October.....	517	2,288,982.08	16.68	73,838.13
November.....	479	2,098,357.36	15.96	69,945.25
December.....	495	2,192,583.85	15.97	70,728.51
January.....	476	2,108,140.42	15.35	68,004.53
February.....	431	1,915,902.78	15.39	68,425.10
March.....	439	1,964,434.22	14.16	63,368.85
April.....	453	2,014,349.13	15.10	67,144.97
May.....	428	1,923,452.18	13.81	62,046.84
Total, first 11 months of fiscal year 1931.....	5,129	22,824,047.84	15.31	68,131.49
Total, first 11 months of fiscal year 1930.....	5,707	24,975,895.48	17.04	74,554.91
Total, first 11 months of fiscal year 1929.....	5,910	24,999,570.94	17.64	74,625.58

In comparison with the first 11 months of the fiscal year 1930, the traffic in the corresponding period this year has had 578 fewer transits and \$2,151,847.64 less tolls, decreases of 10.1 per cent and 8.6 per cent, respectively.

Postal Address of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, May 30, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Baratl.	21	19.55	24	5.55	24	14.07	24	15.15	Dutch.	Royal Neth. S. S. Co.	202.0	33.1	13.0	Cristobal, C. Z.	Buenaventura, Col.	General.	209	1,183	742
Point Gorda.	24	4.45	24	6.10	24	14.12	24	15.26	American.	Swayer & Hoyt.	324.0	46.2	21.0	Lake Charles, La.	Seattle, Wash.	General.	3,245	3,984	3,643
Panaman.	23	21.20	24	6.13	24	13.17	24	14.16	American.	Amer-Hawaiian Line.	407.7	53.7	21.0	Boston, Mass.	Portland, Oreg.	General.	3,336	7,098	5,065
Fordsdale.	23	22.00	24	7.05	24	14.43	24	15.36	British.	Aberdeen & Com'gh Line	500.0	63.2	23.10	London, England	Brisbane, Australia	Ballast.	11,781	7,392	7,392
Steel																			
Exporter.	24	8.05	24	8.40	24	15.58	24	23.32	American.	Isthmian S. S. Lines.	424.2	56.2	25.6	Mobile, Ala.	Shanghai, China.	Tin, steel, etc.	7,786	7,611	5,450
Oakmar.	24	9.20	24	9.45	24	16.50	24	17.40	American.	Calmor Line.	384.4	60.8	19.0	Baltimore, Md.	Seattle, Wash.	Steel, general.	3,896	6,327	4,433
Eisenach.	23	19.20	24	11.05	24	17.54	25	16.30	German.	North German Lloyd.	360.0	50.0	18.1	Hamburg, Germany	Champerico, Guat.	General.	2,295	4,814	3,370
Pacific																			
Trader ² .	24	12.10	24	14.15	24	21.07	26	7.11	British.	Furness, Withy & Co.	420.0	58.0	19.6	Glasgow, Scotland	Vancouver, B. C.	General, spirits.	1,102	7,979	5,916
Carlier.	24	18.55	24	19.45	25	9.43	25	10.53	Belgian.	Comp. Maritime Belge.	471.1	60.8	19.0	Antwerp, Belgium.	Vancouver, B. C.	General.	2,443	9,264	7,044
Virgilio ² .	24	7.50	25	6.10	25	13.06	25	14.05	Italian.	Nav. Gen. Italiana.	482.0	62.0	26.5	Genoa, Italy.	Valparaiso, Chile.	General.	1,713	12,941	9,329
Birmingham																			
City.	25	00.50	25	6.15	25	13.40	25	15.15	American.	Isthmian S. S. Lines.	395.5	55.0	23.9	Baltimore, Md.	Honohlin, T. H.	General.	4,685	7,304	5,188
Coptic ² .	25	6.35	25	7.30	25	14.12	25	22.35	British.	Shaw, Savill & Albion.	482.0	64.3	21.11	Liverpool, England	Auckland, N. Z.	General.	3,825	11,819	8,366
Robin Adair.	25	7.05	25	7.30	25	15.47	25	16.55	American.	Isthmian S. S. Lines.	424.8	55.0	24.2	Baltimore, Md.	Seattle, Wash.	Steel, general.	6,238	7,470	5,529
Arminia.	25	3.45	25	7.35	25	13.30	26	16.10	American.	W. W. Aterbury.	100.0	21.0	9.0	Philadelphia, Pa.	Nome, Alaska.	Ballast.	174	62	62
S-17 ⁴ .	25	9.25	25	9.25	25	13.64	25	15.28	American.	U. S. Navy.	231.0	21.0	10.0	Cristobal, C. Z.	Raloca, C. Z.	Ballast.	174	62	62
Batterton.	25	11.15	25	11.35	25	18.30	25	20.15	American.	Tidewater Oil Co.	481.0	69.2	22.0	New York, N. Y.	San Francisco, Cal.	Ballast.	2,435	10,022	6,743
Solvaben.	25	9.35	25	13.35	25	20.15	25	21.18	German.	North German Lloyd.	491.0	53.8	21.0	Hamburg, Germany	Vancouver, B. C.	General.	2,435	10,022	6,743
Caldas.	19	15.15	25	14.30	25	21.39	26	00.25	Colombian.	National Navigation Co.	116.0	21.1	7.6	Cristobal, C. Z.	Buenaventura, Col.	General.	130	211	124
Wally ⁵ .	25	15.25	25	15.25	25	15.25	25	15.25	American.	Charles Brett.	400.2	32.3	17.0	Cristobal, C. Z.	Gatun, C. Z.	Ballast.	1	1	1
Queen Maud.	20	4.40	26	6.10	26	13.48	26	15.00	British.	DuPont de Nemours.	417.0	56.0	17.4	Baltimore, Md.	Antofagasta, Chile.	General.	1,197	5,748	5,955
Pennsylvania.	25	8.40	26	7.25	26	14.40	27	20.00	American.	The Texas Co.	417.0	56.0	17.4	Pr. Arthur, Tex.	Los Angeles, Calif.	Petroleum prod.	3,748	6,736	4,844
Bitang ² .	26	6.05	26	13.20	26	16.42	26	16.48	Danish.	East Asiatic Co.	284.8	44.2	17.0	Houston, Tex.	Shanghai, China.	General.	2,140	3,031	2,060
Arizona.	26	13.06	26	9.30	26	20.04	26	21.15	American.	Amer-Hawaiian Line	434.3	57.7	17.0	Boston, Mass.	Seattle, Wash.	General.	2,544	7,983	5,916
New Westminster City.	26	14.35	26	14.45	26	21.38	26	22.50	British.	Sir W. R. Smith & Co.	400.5	54.3	24.3	Casa Blanca, Mor.	Japan ⁷ .	Phosphate.	7,787	7,000	5,407
Bostcop.	26	1.55	27	6.00	27	15.40	28	3.35	Dutch.	Royal Neth. S. S. Co.	408.8	58.3	19.2	Hamburg, Germany	Corral, Chile.	General.	1,984	7,817	6,097
Hokuroku																			
Maru ² .	26	21.50	27	6.20	27	16.01	27	17.00	Japanese.	Osaka Shosen Kaisha.	446.0	60.6	24.0	New York, N. Y.	Shanghai, China.	General, tobacco.	4,308	8,942	6,251
Real ⁶ .	27	6.20	27	6.20	27	15.48	27	16.48	Panamanian.	Haus Eilhoft.	62.0	17.6	6.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	46	46	22
Charles Nelson.	27	00.35	27	7.15	27	16.39	27	18.00	American.	Nisson Yusen Kaisha.	380.4	53.1	17.5	New York, N. Y.	Seattle, Wash.	General.	2,918	5,659	4,138
Atago Maru ² .	27	00.35	27	7.30	27	16.39	27	18.35	Japanese.	Nippon Yusen Kaisha.	440.0	57.0	25.6	New York, N. Y.	Kobe, Japan.	General.	6,432	8,158	5,676
S-10 ⁴ .	27	8.25	27	8.25	27	17.34	27	17.34	American.	U. S. Navy.	231.0	21.0	10.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	6,432	8,158	5,676
S-15 ⁴ .	27	8.25	27	8.25	27	17.34	27	17.34	American.	U. S. Navy.	231.0	21.0	10.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	6,432	8,158	5,676
Katrina																			
Lackenbach.	27	4.15	27	9.40	27	18.04	27	19.25	American.	Luckenbach Line.	446.0	56.0	22.9	Boston, Mass.	Seattle, Wash.	General.	3,910	8,508	6,179

⁷ For orders.

⁶ Motor boat.

⁵ Launch.

⁴ Submarine.

³ Yacht.

² Motor ship.

¹ Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Salt water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Nature.	Tons.			Gross.	Net.		
Pacific Pine	25	5.15	25	8.39	25	18.05	25	18.50	American	Dimon S. S. Corp.	410.5	54.3	26.0	Seattle, Wash.	Norfolk, Va.	Lumber, general.	7,360	6,583	4,808
Santa Barbara ¹⁶	25	5.20	25	10.12	25	18.10	25	23.58	American	Grace Line.	466.0	64.0	23.0	Talcahuano, Chile	New York, N. Y.	General.	3,114	10,687	6,633
Pennsylvania	25	10.40	26	6.12	26	13.55	26	14.28	American	Panama-Pacific Line.	586.4	80.3	30.0	San Francisco, Cal.	New York, N. Y.	General.	9,500	25,262	18,194
Dixie Arrow	25	14.35	26	6.42	26	14.30	26	14.30	American	Standard Transp. Co.	468.3	62.7	28.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	11,267	9,744	7,140
Real ¹⁶	25	14.35	26	6.54	26	16.30	27	16.20	Panamanian	Hans Eliott.	62.0	18.0		Balboa, C. Z.	Providence, R. I.	Bananas.	33	46	22
New Jersey ¹	26	2.00	26	7.12	26	15.05	27	16.05	American	The Texas Co.	416.8	56.1	27.0	S. Luis Obispo, Cal.	Providence, R. I.	Gasoline.	7,331	6,925	4,982
Horace	26	7.30	26	8.48	26	16.20	26	17.25	American	Luckenbach Line.	445.0	58.0	26.0	Portland, Ore.	Boston, Mass.	General.	7,556	8,699	6,393
Portland Maru	26	8.30	26	9.14	26	18.00	26	19.55	Japanese	Kokusai Kisen Kaisha	385.0	51.0	25.0	Nagasaki, Japan.	Baltimore, Md.	Sugar.	7,282	5,919	4,424
Pennsylvania	26	8.40	26	9.27	26	19.00	26	19.00	American	Amer.-Japan Line.	407.7	53.7	25.0	Portland, Ore.	Boston, Mass.	General.	6,011	7,107	5,041
Colombia	26	15.43	26	11.18	26	18.15	27	00.05	American	Panama Mail S. Co.	380.0	48.7	24.0	San Francisco, Cal.	Rotterdam, N. Y.	Coffee, general.	2,784	6,015	4,281
Drechtak ¹⁶	26	22.30	27	6.11	27	13.45			Dutch	Holland-America Line.	485.5	62.3	30.0	Vancouver, B. C.	Rotterdam, Holland.	General.	10,241	10,793	7,619
Ludwigshafen	26	23.30	27	6.47	27	14.55			German	North German Lloyd.	393.4	54.3	25.0	Valparaiso, Chile.	Hamburg, Germany	General.	6,002	6,600	4,622
Stillman ¹⁶	27	4.00	27	7.39	27	16.30	27	16.30	British	Inter. Petroleum Co.	565.7	75.6	35.0	Talara, Peru.	Halifax, N. S.	Crude oil.	21,151	16,780	9,885
Wind Rush	27	5.00	27	8.14	27	16.40	27	16.40	British	Shepard S. S. Co.	410.0	54.2	25.0	Seattle, Wash.	Portland, Me.	Lumber, general.	7,367	6,558	4,753
Mahana	27	1.50	27	8.27	27	18.00	27	20.25	British	Shaw, Savill & Albion.	500.9	63.3	25.0	Pt. Chalmers, N. Z.	London, England.	Frozen, general.	6,447	12,083	8,503
Charles	27	8.10	27	9.03	27	17.50	28	17.50	American	Arrow Line.	409.7	54.2	25.0	Aberdeen, Wash.	Baltimore, Md.	Lumber.	7,475	6,693	4,903
Sandar ¹⁶	27	16.15	28	6.11	28	13.40	28	13.40	Norwegian	Anglo-Saxon Pet. Co.	451.9	59.2	25.8	San Francisco, Cal.	Curacao, D. W. I.	Gasoline.	10,663	7,944	5,408
San Jose	27	11.40	28	6.23	28	14.10	29	10.05	American	United Fruit Co.	329.0	44.6	17.0	San Francisco, Cal.	Cristobal, C. Z.	General.	468	3,675	2,359
Atlantic Sun	28	2.50	28	7.10	28	15.05	28	15.05	American	Sun Oil Co.	439.3	59.2	26.0	Los Angeles, Calif.	Chester, Pa.	Gasoline.	8,977	7,567	5,283
Kamak	28	0.03	28	8.05	28	15.35	28	17.20	German	Hamburg-American Line	439.6	50.7	25.7	Valparaiso, Chile.	Hamburg, Germany	General.	7,654	7,421	5,373
Heart	28	3.00	28	8.46	28	17.00	28	15.10	Dutch	Royal Neth. S. S. Co.	361.3	50.5	21.0	Valparaiso, Chile.	Hamburg, Germany	General.	5,193	4,759	3,660
Atlantic City	28	5.30	28	9.13	28	17.15	28	17.15	British	Royal South Line.	411.7	54.5	27.9	Vancouver, B. C.	Cardiff, England.	General.	8,604	6,555	4,659
Washington	28	12.10	28	12.55	28	20.35	28	20.35	American	The Texas Co.	425.8	57.0	25.6	Los Angeles, Calif.	Providence, R. I.	Gasoline.	9,045	7,484	5,216
Kinko Maru	28	22.30	29	6.35	29	13.30	29	16.00	Japanese	Kokusai Kisen Kaisha	385.0	51.0	26.5	Manila, P. I.	Atlantic pts., U. S.	Sugar.	7,300	5,919	4,389
Columbus	29	0.10	29	9.36	29	15.45	29	14.05	American	Pac-Ang-Brazil Line.	410.3	54.0	21.0	Powell River, B. C.	Buenos Aires, Arg.	Lumber, general.	3,806	6,625	5,046
West Cactus	29	1.15	29	7.18	29	15.05	29	15.05	American	Amer.-Hawaii Line.	404.6	52.0	24.0	San Francisco, Cal.	Boston, Mass.	General.	4,710	6,780	4,450
Willard	29	4.00	29	8.16	29	15.55	29	15.55	American	Williams S. S. Co.	386.8	52.2	24.0	Philadelphia, Wash.	Baltimore, Md.	General.	6,552	5,684	4,070
Lisbon Maru	29	10.30	29	9.37	29	16.55	29	19.10	Japanese	Nippon Yusen Kaisha.	445.0	58.0	26.0	Manila, P. I.	New York, N. Y.	General.	8,083	8,015	5,849
San Vincente	29	11.30	29	11.56	29	19.10	29	19.10	American	Quaker Line.	410.5	54.3	26.0	Pt. Alberni, B. C.	Philadelphia, Pa.	General.	9,550	6,572	4,900
Santa Rita ¹⁶	29	14.00	30	6.15	30	13.05	30	22.05	American	Grace Line.	370.0	53.2	23.0	Valparaiso, Chile.	New York, N. Y.	Lumber, general.	3,623	6,254	4,090
Big Bell ¹⁶	29	17.45	30	6.10	30	15.40			Panamanian	P. J. Foster.	610.0	16.6		Balboa, C. Z.	Cristobal, C. Z.	Ballast.	7,600	1,879	4,235
Acardo ¹	29	17.45	30	6.51	30	14.30	30	18.00	British	Anglo-Saxon Pet. Co.	402.0	53.4	24.0	Los Angeles, Calif.	Lands End, Eng.	Gasoline.	7,693	6,152	4,011
Cerigo	30	2.00	30	7.06	30	15.20			German	Hamburg-American Line	227.2	34.4	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	5,891	11,116	7,894
Maha	30	2.45	30	7.39	30	15.45	30	18.55	British	Shaw, Savill & Albion.	477.6	63.1	24.0	Lyttelton, N. Z.	London, England.	Frozen, general.	7,753	7,611	5,450
Steel Inventor	30	3.55	30	8.29	30	16.45	30	21.45	American	Isleham S. S. Lines.	424.2	56.2	25.4	Vancouver, B. C.	Avonmouth, Eng.	General.	7,753	6,221	4,297
Benech	30	11.00	30	12.00	30	20.00	30	31.32	British	Can-Amcr. S. S. Co.	410.6	54.1	24.0	Vancouver, B. C.	Rotterdam, Holland.	General.	9,227	7,068	5,303
Stam ¹⁶	30	13.15	30	13.56	30	21.25	31	00.40	Danish	East Asiatic Co.	410.0	55.2	26.0	Seattle, Wash.	Copenhagen, Den.	General.	7,780	6,571	4,607
Schwarzewald	30	16.50	30	17.36	31	12.50	31	00.30	Danish	Hamburg-American Line	399.4	54.2	26.0	Corral, Chile.	Hamburg, Germany	General.	7,780	6,571	4,607

¹⁶ Motor ship. ¹⁷ Yacht. ¹⁸ For orders. ¹⁹ Copper, cotton, and general.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

¹ Tanker.

PORT OF CHRISTOBAL.

* DEPARTURES.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 25	Perou.	French Line.	St. Nazaire via waypoints.	May 24	No. 144-M ²⁰	Pan American-Grace Airways.	Pimental via waypoints.
May 25	Darien C-35 ²⁰	Seacliff Airplane Co.	Barranquilla via wayp. Gt.	May 24	No. 9688 ²⁰	Pan American Airways.	San Salvador and waypoints.
May 26	Pastores	United Fruit Co.	Caragena, Colombia.	May 24	No. 669-M ²²	Pan American Airways.	Miami via waypoints.
May 26	Inapacuma ²¹	A. Tagaropoulos.	Colon, Rep. of Panama.	May 24	Colombia.	Royal Netherlands S. S. Co.	Amsterdam & waypoints.
May 26	Anachucuna ²¹	A. Tagaropoulos.	Caracao, D. W. I.	May 24	Ancon.	Panama R. R. S. S. Line.	New York via Haiti.
May 27	Camden.	United Fruit Co.	Pimental via waypoints.	May 26	Anachucuna ²¹	A. Tagaropoulos.	Colon, Rep. of Panama.
May 27	No. 144-M ²⁰	Pan American-Grace Airways.	New Orleans, La.	May 26	Inapacuma ²¹	A. Tagaropoulos.	Colon, Rep. of Panama.
May 27	Metapan.	United Fruit Co.	New Orleans, La.	May 27	Pastores	Pan American Airways.	San Salvador & waypoints.
May 28	No. 9685 ²⁰	Pan American Airways.	San Salvador & waypoints.	May 27	No. 9670 ²⁰	United Fruit Co.	New York via waypoints.
May 28	Esfuerzo ²¹	J. Asmussen.	Bluefields, Nicaragua.	May 27	United Fruit Co.	United Fruit Co.	Miami via waypoints.
May 28	No. 670-M ²⁰	Pan American Airways.	Miami via waypoints.	May 27	Perou.	French Line.	New York via Kingston.
May 28	Bogota.	Colombian S. S. Line.	New York via waypoints.	May 27	Camden.	United Fruit Co.	Havre via waypoints.
May 29	Calamarcas.	United Fruit Co.	New Orleans via Habana.	May 28	Irona.	United Fruit Co.	Port Limon & Costa Rica.
May 29	Cefalu.	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	May 28	Metapan.	United Fruit Co.	Port Limon via Bocas.
May 29	Pearl Marie ²²	G. I. Bryan.	Colon, Rep. of Panama.	May 29	Darien C-35 ²⁰	Seacliff Airplane Co.	Barranquilla & waypoints.
May 30	Arnetta I. ²¹	P. W. Hamilton.	Colon, Rep. of Panama.	May 29	No. 144-M ²⁰	Pan American-Grace Airways.	Talara via waypoints.
May 30	No. 755-Y ²⁰	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	May 29	Bogota.	Colombian S. S. Line.	New York via waypoints.
May 30	No. 669-M ²⁰	Standard Oil Co.	Marcabo via waypoints.	May 29	Pearl Marie ²²	G. I. Bryan.	Bluefields, Nicaragua.
May 30		Pan American Airways.	Miami via waypoints.	May 29	Calamarcas.	United Fruit Co.	New York via waypoints.
May 30				May 30	Arnetta I. ²¹	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.
May 30				May 30	Cefalu.	P. W. Hamilton.	Colon, Rep. of Panama.
May 30				May 30	Esfuerzo ²¹	Standard Fruit & S. S. Co.	New Orleans & waypoints.
May 30				May 30		J. Asmussen.	Bluefields, Nicaragua.

²⁰ Air mail carrier. ²¹ Motor boat. ²² Motor schooner.

PORT OF BALBOA.

May 26	El Libertador ²³	Hans Elliott.	Panama Bay, R. P.	May 28	Sveadrott ²⁴	Knutsen Line.	Antofagasta, Chile.
May 26	Sambu ²³	Hans Elliott.	Panama Bay, R. P.	May 28	El Libertador ²³	Hans Elliott.	Panama Bay, R. P.
May 26	Cuzco.	Grace Line.	Tacoma, Wash.	May 27	Sambu ²³	Hans Elliott.	Panama Bay, R. P.
May 27	Gymerie ²	Anglo-Saxon Petroleum Co.	Los Angeles, Calif.	May 28	Cuzco.	Grace Line.	Valparaiso, Chile.
May 28	Frost ²⁴	West India Oil Co.	Talara, Peru.	May 29	Gymerie ²	Anglo-Saxon Petroleum Co.	Los Angeles, Calif. ²⁵
May 28				May 28	Frost ²⁴	West India Oil Co.	Talara, Peru.

²³ Tanker. ²⁴ Motor schooner. ²⁵ For orders. * Other than ships passing through the Canal.]

Colon Fill Completed.

Work on a hydraulic fill involving 37 acres has been recently completed on property of the Panama Railroad in Colon. The fill, involving six blocks of swamp land south of Ninth Street, was begun on November 1, 1930, by forces of the Dredging Division of The Panama Canal. The material was removed from Folks River by dredge *No. 86*, and pumped to the filled-in area with the assistance of a relay pump barge. The total amount of material remaining in place after the run-off amounted to 489,100 cubic yards.

The land was filled in to meet the demand for additional land in the city suitable for building sites. After proper settlement of the fill the land will be improved with modern structures by the lessees.

Regulating Level of Gatun Lake.

THE PANAMA CANAL, DEPARTMENT OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., May 28, 1931.

To all concerned:

1. The following schedule for maintaining Gatun Lake during the 1931 rainy season will be adhered to as closely as conditions permit.

2. The lake will be allowed to fill to elevation 85.50 before any water is wasted over the spillway. However, spilling for sanitary purposes or for exhibition will be permitted upon approval of the Chief of Surveys. The lake will be held between elevations 85.50 and 86.00 until October 1; filled to elevation 86.50 in October; and to elevation 87.00 after November 1, to be varied slightly according to water supply conditions. After spillage is begun, a variation of 0.50' from above elevations will be allowed to lessen the number of gate operations.

J. L. SCHLEY,
Engineer of Maintenance.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective May 25, 1931.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.24
Bronze, Tobin, average.....	Lb.	.24
Gasoline, motor grade.....	Gal.	.105
Metal, yellow.....	Lb.	.23
Oakum, Navy, spun.....	Lb.	.23
Oakum, Navy, unspun.....	Lb.	.13
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulfridon Med. No. 2135.....	Gal.	.33
Oil, engine, gas, extra heavy, in cases, Gulfridon No. 2250.....	Gal.	.45
Oil, engine, gas, extra heavy, in drums, Gulfridon, No. 2250.....	Gal.	.39
Oil, kerosene, in drums.....	Gal.	.07
Oil, marine engine.....	Gal.	.49
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.11
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.11
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.13
Waste, cotton, white.....	Lb.	.16

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending May 31, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
Ancon	Panama R. R. S. S. Line		May 24		920
Baralt	Royal Netherlands S. S. Co.		May 24		208
Colombia	Royal Netherlands S. S. Co.		May 24		975
Eisenach	North German Lloyd		May 24		27
Virgilio	Italian S. S. Line	May 24	May 25	327	22
Colombo	Italian S. S. Line	May 24	May 26	12	1,096
Caldas	National Navigation Co.		May 25		138
Santa Barbara	Grace Line	May 25	May 25	103	354½
Syra	Hamburg-American Line	May 25	May 25	28	281
Schwaben	North German Lloyd	May 25	May 25	44	50
Pennsylvania	Texas Oil Co.	May 25	May 26	1,659	(²)
Tai Ping Yang	Barber Wilhelmsen Line	May 25	May 26	31	185
Perou	French Line	May 25	May 27	59	443
Cauca	National Navigation Co.	May 25	May 29	164	112
Pastores	United Fruit Co.	May 26	May 27	86	852
Colombia	Panama Mail S. S. Co.	May 26	May 27	1,022	35
Boskoop	Royal Netherlands S. S. Co.	May 26	May 27	105	186½
Drechtdijk	Holland-America Line	May 27	May 27	65	258
Iriona	United Fruit Co.	May 27	May 27	671	5
Camden	United Fruit Co.	May 27	May 27	4,642	(²)
Metapan	United Fruit Co.	May 27	May 28	1,056	133
Ludwigshafen	North German Lloyd	May 27	May 28	(¹)	502
Santa Maria	Grace Line	May 28	May 28	360	270
West Ira	McCormick S. S. Co.	May 28	May 28	28	136
Karnak	Hamburg-American Line	May 28	May 28	25	(²)
Haarlem	Royal Netherlands S. S. Co.	May 28	May 29	133	4½
San Jose	United Fruit Co.	May 28	May 29	480	156
Bogota	United Fruit Co.	May 28	May 29	9½	23
Esfuerzo	J. Amussen	May 28	May 30	11	35
Calamares	United Fruit Co.	May 29	May 29	221	75
Pearl Marie	R. Feuillebois	May 29	May 29	(¹)	37
Lisbon Maru	Nippon Yusen Kaisha	May 29	May 29	88	(²)
Cefalu	Standard Fruit & S. S. Co.	May 29	May 30	241	356
Cali	Roland Line		May 30		68
Santa Rita	Grace Line	May 30	May 30	235	89
Acajutla	Pacific Steam Navigation Co.		May 30		571
Cerigo	Hamburg-American Line	May 30		693	
Nosa Prince	N. O. & S. A. S. Co.	May 30	May 31	245	124
Iriona	United Fruit Co.	May 31	May 31	51	380
Rugia	Hamburg-American Line	May 31		28	
Schwarzwald	Hamburg-American Line	May 31	May 31	31	(²)
President Grant	Dollar Line	May 31	May 31	564	(²)
San Clemente	Quaker S. S. Line	May 31		311	

¹ No cargo discharged.

² No cargo laded.

³ 425 pounds.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending May 30, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
Durazzo	Hamburg-American Line	May 23	May 23	Tons.	Tons.
Eisenach	North German Lloyd	May 24	May 25	116	66
Tai Ping Yang	Barber Wilhelmsen Line	May 24	May 25	461	
Santa Barbara	Grace Line	May 25	May 25	12	
Colombia	Panama Mail S. S. Co.	May 25	May 26	52	
Cuzco	Grace Line	May 26	May 28	754	
Pennsylvania	The Texas Co.	May 26	May 27	3,748	
Gymeric	Anglo-Saxon Petroleum Co.	May 27	May 29	8,940	
Boskoop	Royal Netherlands S. S. Co.	May 27	May 27	149	
San Jose	United Fruit Co.	May 27	May 28	271	44
Lisbon Maru	Nippon Yusen Kaisha	May 28	May 29	97	
Frost	West India Oil Co.	May 28	May 28	250	
Santa Rita	Grace Line	May 29	May 30		2

Official Circular.

Acting Marine Superintendent.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 28, 1931.

To all concerned.—During the absence of Capt. C. H. Woodward, U. S. N., on leave, effective May 29, 1931, at noon, and until Capt. William Ancrum, U. S. N., reports for

duty with The Panama Canal, Commander W. R. Smith, U. S. N., in addition to his duties as Captain of the Port, Cristobal, will act as Marine Superintendent and Chairman, Board of Admeasurement.

During the same period, Commander G. C. Barnes, U. S. N., will act as Chairman, and Assistant Port Captain A. F. Wescott as Member, Board of Local Inspectors.

H. BURGESS,
Governor.

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors.

The rates are as follows:

(a) For handling cargo from ship's side to storage place, \$1 per ton of 2,000 pounds or 40 cubic feet on general merchandise, and one-half of the transfer rates provided by Item 34, Panama Canal Tariff No. 10, on other commodities.

(b) For handling cargo from storage place to ship's side, *i. e.*, for delivering or reforwarding it, the same rates as for receiving and storing, as per (a), above. The minimum charge for handling any shipment taken out of storage is \$1.

(c) For storage: First 35 days free; thereafter, 3 cents per day or fraction thereof per ton of 2,000 pounds or 1½ cents per day or fraction thereof per ton of 40 cubic feet.

Special rates on special commodities in large quantities may be obtained on request.

Various lines operating out of Cristobal and Balboa to the west coast of Central and South America will accept their proportion of the through rate for the haul beyond the Isthmus, as explained in the following paragraph:

By virtue of the Canal Zone for Orders arrangement shippers are enabled to consign cargo to the Isthmus and subsequently to reassign it to any port beyond the Isthmus to which there is a through rate from port of origin without sacrificing their right to the through freight rate. This means that when a shipment moves from, say, New York to the Canal Zone, usual local rates will be charged to Cristobal or Balboa, as the case may be; but should the owner wish to reforward to any other port to which there is a through rate from port of origin, he may do so upon payment of the receiving carrier's proportion of the through rate from port of origin to port of ultimate destination, and upon evidence that the shipment, or any part of it, has moved beyond the Isthmus, the initial carrier will refund the difference between its proportion of the through rate applicable and the local rate.

In addition to reassigning beyond the Isthmus, cargo billed Cristobal for Orders may be reassign to Panama City or line points on the Panama Railroad on the basis of through rates from port of origin to Panama City. In this case the Panama Railroad Company's charges will be the difference between the rate charged to Cristobal by the ocean carrier and the through rate from port of origin to Panama City, and the necessary adjustments with the ocean carrier will be made by the Panama Railroad Company without inconvenience to shippers or consignees. The handling charge from storage place to cars is the same as from storage place to ship's side.

Cargo deposited in Hold for Orders Warehouse, Cristobal, which consignees desire transferred to Hold for Orders Warehouse, Balboa, will be assessed a charge of \$1 per ton on general cargo and one-half the transfer rates on other commodities for handling from the warehouse into cars at Cristobal, and a second charge of the same kind for handling from cars into warehouse at Balboa. The same charge will again apply when the cargo is reforwarded from, or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on Hold for Orders cargo discharged from vessels at Balboa.

Cargo consigned to Hold for Orders, Balboa, arriving at Cristobal piers, and/or cargo consigned to Hold for Orders, Cristobal, on which by previous arrangement the destination has been changed to Hold for Orders, Balboa, prior to arrival of the vessel, will be assessed one handling charge of \$1 per ton on general cargo or one-half of the transfer rates on other commodities for handling from shipside across piers and into cars at Cristobal and from cars into the Hold for Orders Warehouse, Balboa. The same charge will apply when the cargo is reforwarded from or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on cargo moving in the opposite direction.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," will be supplied on request to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., June 10, 1931. No. 45.

Tanker Traffic Through the Panama Canal in May, 1931.

During the month of May, 1931, 61 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 342,776, on which tolls of \$303,243.43 were paid. Cargo amounted to 330,034 tons, all mineral oils.

In point of net tonnage, tanker traffic decreased 32.6 per cent in comparison with the tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 27.6 per cent.

Tank ships comprised 14.3 per cent of the total commercial transits through the Canal during the month; made up 15.7 per cent of the total Panama Canal net tonnage; were the source of 15.8 per cent of the tolls collected; and carried 17.1 per cent of the total cargo through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of May, 1931, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for May, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British	9	47,872	\$36,089.72	8,392
German	1	4,340	3,124.80	.....
Norwegian	3	17,542	12,503.07	.....
Swedish	1	7,123	5,128.56	.....
United States	17	91,618	69,070.53	5,348
Total, May, 1931	31	168,495	125,916.68	13,740
Total, April, 1931	31	178,523	131,825.47	16,767
Total, March, 1931	35	193,420	144,362.80	9,382
Total, May, 1930	48	272,155	202,856.35	33,928
<i>Pacific to Atlantic.</i>				
British	4	26,163	28,000.00	53,092
Norwegian	5	28,567	30,140.00	53,461
United States	21	119,551	119,186.75	209,741
Total, May, 1931	30	174,281	177,326.75	316,294
Total, April, 1931	38	225,203	231,846.94	403,030
Total, March, 1931	30	168,520	168,110.98	293,411
Total, May, 1930	44	236,762	242,891.54	422,174

The following tabulation shows the tanker traffic through the Canal during May, 1931, classified according to trade routes:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
United States intercoastal.....	20	105,152	\$77,218.02	1,600
United States to South America.....	1	4,326	3,114.72	.....
United States to Balboa.....	1	4,844	4,957.50	3,748
Canada to United States.....	1	4,235	3,049.20	.....
Canada to South America.....	2	17,602	12,673.44	.....
Mexico to South America.....	1	4,546	4,895.00	8,392
Europe to United States.....	3	17,341	12,485.52	.....
South Africa to United States.....	1	7,123	5,128.56	.....
North Africa to South America.....	1	3,326	2,394.72	.....
<i>Pacific to Atlantic.</i>				
United States intercoastal.....	20	114,776	115,748.75	209,741
United States to South America.....	1	4,775	3,438.00	.....
United States to West Indies.....	2	12,183	12,676.25	23,752
United States to Europe.....	4	20,619	21,778.75	37,309
South America to United States.....	1	4,326	4,633.75	7,941
South America to Canada.....	2	17,602	19,051.25	37,551

Of the tanker traffic passing through the Canal in May, 1931, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for May, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles:</i>				
May, 1931.....	22	116,497	\$85,220.49	3,748
April, 1931.....	24	134,042	96,510.24	.....
March, 1931.....	26	146,574	107,033.60	3,000
May, 1930.....	33	190,213	139,975.35	14,359
<i>From Los Angeles:</i>				
May, 1931.....	20	115,283	116,952.50	212,030
April, 1931.....	26	147,531	152,761.60	266,202
March, 1931.....	20	115,950	115,424.75	199,722
May, 1930.....	32	173,014	177,384.65	311,898

Traffic by Nationality for May, 1931.

The following tabulation shows the commercial traffic through the Canal during the month of May, 1931, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for May, 1930 and 1929:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	11,836	8,709	13,729	8,436	89,158.99	2,443
British.....	53	289,863	210,587	345,818	210,242	234,501.24	102,143
Chilean.....	2	4,783	3,498	7,671	4,098	4,372.50	1,999
Colombian.....	5	731	712	1,113	716	862.10	782
Danish.....	8	38,963	26,950	43,775	27,292	30,814.50	15,876
Dutch.....	6	24,858	15,501	26,251	15,581	19,376.25	9,798
French.....	2	13,155	8,917	15,242	9,318	11,146.25	4,158
German.....	14	49,246	33,824	56,761	33,777	40,577.30	19,359
Italian.....	3	21,132	13,949	26,324	15,925	17,436.25	3,967
Japanese.....	7	39,852	32,618	50,917	32,340	40,570.05	44,102
Norwegian.....	15	73,441	47,903	81,016	48,075	54,492.32	35,263
Panamanian.....	2	44	48	90	58	36.00	.....
Swedish.....	6	32,067	22,997	56,488	28,344	23,627.55	11,063
United States.....	94	481,395	359,838	588,410	359,414	423,160.16	268,891
Total, May, 1931.....	219	1,081,366	786,051	1,313,605	793,616	910,131.46	519,84*
Total, May, 1930.....	234	1,210,174	906,086	1,506,197	913,745	1,032,268.60	681,073
Total, May, 1929.....	278	1,329,095	1,011,384	1,668,713	1,014,479	1,164,303.77	920,360

* Includes naval vessel of 5,500 displacement tons.

^ Includes Merchant Marine training vessel of 1,058 displacement tons.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	6,292	4,986	7,816	5,758	\$6,232.50	10,098
British.....	44	273,830	200,312	338,893	206,971	250,390.00	318,774
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	2,901
Colombian.....	4	570	550	880	550	678.25	621
Danish.....	3	14,936	9,682	15,841	9,820	12,102.50	24,337
Dutch.....	5	18,781	11,791	20,128	12,281	14,738.75	24,579
French.....	3	16,092	10,861	18,680	11,301	13,576.25	21,193
German.....	18	96,136	63,253	125,106	69,147	79,066.25	84,209
Italian.....	2	17,372	13,441	24,954	14,083	16,801.25	10,971
Japanese.....	8	41,273	34,741	51,991	34,115	42,914.90	51,733
Norwegian.....	14	72,512	51,578	86,630	53,533	64,472.50	117,966
Panamanian.....	4	7,030	3,735	6,987	3,743	4,652.47	6,807
Swedish.....	5	22,769	16,421	46,080	20,094	20,526.25	63,016
United States.....	97	511,328	387,899	635,084	388,200	482,877.65	668,403
Total, May, 1931.....	209	1,103,593	812,683	1,386,380	833,572	1,013,320.72	1,405,608
Total, May, 1930.....	245	1,208,459	908,637	1,511,430	918,912	1,130,630.00	1,580,543
Total, May, 1929.....	246	1,167,810	897,630	1,481,885	906,931	1,132,242.80	1,616,479

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	3	18,128	13,695	21,545	14,194	\$15,391.49	12,541
British.....	97	563,693	410,899	684,711	417,213	484,891.24	420,917
Chilean.....	3	9,455	6,931	14,981	8,074	8,663.75	4,900
Colombian.....	9	1,301	1,262	1,993	1,266	1,540.30	1,403
Danish.....	11	53,899	36,632	59,616	37,112	42,917.00	40,213
Dutch.....	11	43,639	27,292	46,379	27,862	34,115.00	34,377
French.....	5	29,247	19,778	33,922	20,619	24,722.50	25,351
German.....	32	145,382	97,077	181,867	102,924	119,643.55	103,568
Italian.....	5	38,504	27,390	51,278	30,008	34,237.50	14,938
Japanese.....	15	81,125	67,359	102,908	66,455	83,484.95	95,835
Norwegian.....	29	145,953	99,481	167,646	101,608	118,964.82	153,229
Panamanian.....	6	7,074	3,783	7,077	3,801	4,688.47	6,807
Swedish.....	11	54,836	39,418	102,568	43,438	44,153.80	74,079
United States.....	191	992,723	747,737	1,223,494	747,614	906,037.81	937,294
Total, May, 1931.....	428	2,184,959	1,598,734	2,699,985	1,627,188	1,923,452.18	1,925,452
Total, May, 1930.....	479	2,418,633	1,814,723	3,017,627	1,832,657	2,162,898.60	2,261,616
Total, May, 1929.....	524	2,496,905	1,909,014	3,150,598	1,921,410	2,296,546.57	2,536,839

¹ Includes naval vessel of 5,500 displacement tons.

² Includes Merchant Marine training vessel of 1,058 displacement tons.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., June 5, 1931.

No. 896.

Colombia, west coast, Buenaventura River entrance, Palmas Island Light, reported irregular. The following is quoted from Notice to Mariners No. 20, Washington, D. C., dated May 16, 1931:

The third officer of the German M. S. *Koenigsberg* reports that on the night of April 25, 1931, Palmas Island Light was observed to be showing 1 flash every 2.5 seconds.

Approximate position: 30° 53' 28" N., 77° 22' 12" W.

H. BURGESS,
Governor.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, June 6, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Tons.	Gross.	Net.	Nature.	Tons.	Gross.	Net.
Nosa Prince.	30	16 00	31	6 00	31	13 20	31	15 05	American.	N. O. & S. A. S. S. Co.	324.0	56.1	18.7	New Orleans, La.	Talcahuano, Chile.	General.	2,081	3,983	2,570
Valeau City.	30	20 52	31	7 10	31	14 33	31	15 40	British.	Reardon Smith Line	420.4	54.5	12.0	Barry, England	Portland, Ore.	Ballast.	6,870	5,943	
El Lobo.	31	11 40	31	11 50	31	18 30	31	19 55	British.	Anglo-Panama Oilfields.	385.2	51.0	19.0	Teneriffe, Canary Is.	La Libertad, Chile	Ballast.	4,881	3,926	
San Silvestre.	31	13 05	31	13 20	31	20 52	31	22 00	British.	Anglo-Mexican Co.	420.5	54.6	26.0	Pro. Mexico, Mex.	Valparaiso, Chile	Gas, fuel oil.	8,392	6,583	4,946
Herman Frasch.	31	18 00	31	18 10	31	9 13	31	10 34	American.	Texas Gulf Sulphur Co.	356.0	51.6	23.0	Newport News, Va.	Shanghai, China.	Sulphur.	5,075	5,349	2,960
Aden Maru.	1	3 30	1	6 10	1	13 15	1	14 25	Japanese.	Kokusai Kisen Kaisha	395.0	51.6	17.6	New York, N. Y.	Tientsin, China.	Tobacco.	1,889	6,203	4,672
Courageous.	1	4 15	1	7 10	1	14 25	1	15 35	American.	Roosevelt S. Co., S. B.	456.1	56.0	23.3	New York, N. Y.	Shanghai, China.	Gen., case oil.	6,197	8,208	5,850
S-14.	1	8 00	1	8 00	1	15 30	1	16 30	American.	U. S. Navy	231.0	21.0	21.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
S-16.	1	8 00	1	8 00	1	15 30	1	16 30	American.	U. S. Navy	231.0	21.0	21.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
Marienta.	1	5 45	1	12 00	1	18 55	1	19 50	British.	Royal Mail S. P. Co.	450.0	58.0	20.3	Rotterdam, Holland	Vancouver, B. C.	General.	2,120	8,856	6,559
Albert Vogler.	1	5 25	1	12 50	1	20 05	1	21 45	German.	Hamburg-American Line	409.8	55.0	18.6	Hamburg, Germany	Talcahuano, Chile.	General.	2,953	7,173	5,514
El Salvador.	1	6 40	1	14 10	1	20 20	2	20 35	American.	Panama Mail S. S. Co.	380.2	51.6	22.10	New York, N. Y.	San Francisco, Cal.	General, coffee.	1,785	5,710	4,011
Chateau.	1	5 55	1	14 40	1	21 00	2	12 23	American.	U. S. Army	436.0	58.0	24.9	New York, N. Y.	Honolulu, T. H.	General.	655		
Thierry.	31	20 35	1	15 10	1	21 55	1	23 10	American.	Quaker Line	410.0	54.4	16.4	New York, N. Y.	Seattle, Wash.	General.	2,571	6,476	4,682
San Clemente.	1	17 25	1	18 00	2	9 24	2	10 20	American.	Standard Oil Co.	513.0	68.2	24.6	London, England	Los Angeles, Calif.	Ballast.	11,719	8,619	
Atlanta.	1	18 00	1	18 25	2	11 37	2	12 23	American.	Argonaut S. S. Co.	410.5	54.3	21.0	Baltimore, Md.	Vancouver, B. C.	Steel, general.	3,981	6,567	4,917
Sultria.	1	18 10	1	19 20	2	12 02	2	13 08	British.	Donaldson Line	425.0	60.0	20.0	Glasgow, Scotland	Vancouver, B. C.	Ballast.	7,827	5,429	
Tidewater.	1	18 45	2	6 10	2	15 00	2	16 25	American.	Tidewater Oil Co.	480.0	66.0	24.0	Chester, Pa.	Los Angeles, Calif.	Ballast.	9,742	6,373	
Canadian.	2	15	2	6 15	2	15 12	2	16 30	British.	Can. Nat. Steamships	400.0	52.0	22.0	Montreal, Canada	Vancouver, B. C.	General.	5,310	5,885	4,073
Winner.	2	25	2	7 20	2	15 50	2	17 14	American.	Swayne & Hoyt	386.8	52.2	19.0	Houston, Tex.	Seattle, Wash.	General.	3,800	5,705	4,167
Point Salinas.	2	25	2	7 20	2	15 50	2	17 14	American.	The Texas Co.	416.8	56.1	17.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	6,782	4,830	
Texas.	2	6 25	2	8 25	2	16 44	2	17 52	British.	R. Chapman & Son	365.0	55.0	18.0	Tyne, England	Vancouver, B. C.	Ballast.	6,823	4,827	
Granton.	2	6 25	2	9 40	2	16 53	2	18 10	British.	Andrew Weir & Co.	415.0	51.5	21.8	Galveston, Tex.	Sydney, Australia.	Sulphur.	4,785	5,415	3,986
Newton Elm.	2	9 05	2	9 43	2	17 25	2	18 25	American.	Amer-Hawaiian Line	407.7	53.7	20.8	Boston, Mass.	Seattle, Wash.	General.	2,569	7,150	5,024
Minnesota.	2	9 40	2	10 35	2	18 07	2	19 08	American.	Sun Oil Co.	480.6	66.0	22.0	Miami, Fla.	Los Angeles, Calif.	Ballast.	9,620	6,476	
City of.	2	14 30	2	14 45	2	21 54	2	23 15	British.	Ellerman & Bucknall.	416.0	56.1	21.1	Philadelphia, Pa.	Sydney, Australia.	General.	4,100	7,987	6,093
Kimberly.	2	16 20	2	16 50	3	9 46	3	10 50	American.	Sun Oil Co.	481.0	66.0	24.0	Chester, Pa.	Los Angeles, Calif.	Ballast.	9,607	6,551	
Western Sun.	3	00 15	3	6 40	3	13 31	3	14 30	American.	Loeknboch Line	436.6	57.0	21.0	Boston, Mass.	Seattle, Wash.	General.	3,733	8,543	6,427
Edward.	3	00 15	3	6 40	3	13 31	3	14 30	American.	Loeknboch Line	436.6	57.0	21.0	Boston, Mass.	Seattle, Wash.	General.	3,733	8,543	6,427
S-48.	3	10 20	3	10 30	3	17 05	3	18 15	British.	U. S. Navy	240.0	21.0	21.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
Amertion.	3	18 35	3	18 50	4	9 57	4	11 04	American.	R. Chapman & Sons	409.6	54.0	16.0	Tyne, England	Pacific S.	Case oil, general.	7,728	7,982	5,911
Livingston.	3	18 35	3	18 50	4	9 57	4	11 04	American.	Tampa InterOcean Co.	434.3	57.7	22.0	New Orleans, La.	Cebu, P. I.	Case oil, general.	7,728	7,982	5,911
Roe.	3	19 30	4	6 05	4	14 28	4	15 50	American.	Richfield Oil Co.	462.9	60.0	21.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	8,491	6,065	

1 Tanker.

2 Submarine.

3 Transport.

4 Motor ship.

5 Oilers.

Standard Arrow	4	6.30	4	7.25	4	16.30	American	427	6	62	7	Braunton, Texas.	Los Angeles, Calif.	Batching oil	8,457	9,698	6,783
Tatiana Maru	4	9.45	4	10.00	4	18.12	Japanese	433	0	56	0	Port Tampa, Fla.	Yokohama, Japan.	Cotton, phosp. lye.	7,850	6,763	4,959
Honaka	3	11.35	4	11.40	4	17.59	4	391	0	53	0	New York, N. Y.	Fremanile, Aust. lla	General	2,510	6,372	4,629
Annie Johnson	4	00.30	4	12.47	4	19.05	20	383	0	53	0	Stockholm, Sweden	Vancouver, B. C.	General	2,311	6,560	4,299
Reberette	4	9.10	4	13.50	4	20.53	5	350	0	52	0	Dunkirk, France.	Noumea, N. Cahid	General	2,792	5,503	3,772
Mabriton	4	19.15	4	19.30	5	10.10	British	412	6	55	5	S. Shields, England	Vancouver, B. C.	Ballast	6,823	4,797	10,498
President	4	15.00	5	6.00	5	21.30	American	516	2	72	2	New York, N. Y.	Manila, P. I	General	1,603	15,236	10,498
McKinley	4	23.35	5	6.15	5	23.58	British	500	4	63	0	London, England	Auckland, N. Z.	General	3,500	13,590	9,233
Mateora	5	5.30	5	7.20	6	14.29	6	586	4	80	3	New York, N. Y.	San Francisco, Cal	General	2,567	25,254	18,170
Virginia	4	21.20	5	7.25	5	16.05	American	461	4	69	6	New York, N. Y.	Taku Bar, China	General	5,722	10,009	7,072
Tai Yang	4	23.45	5	9.25	5	17.34	5	421	8	56	0	New York, N. Y.	Valparaiso, Chile	General	1,111	7,764	4,675
Tono	4	20.53	5	9.40	5	18.50	Chilean	409	8	54	2	Baltimore, Md.	Seattle, Wash.	Steel, general.	4,033	6,757	4,802
Yorkmar	5	2.00	5	10.40	5	19.30	Japanese	385	0	51	0	New York, N. Y.	Shanghai, China.	Phosphate, etc.	4,432	6,214	4,665
England Maru	5	2.40	5	11.00	5	20.09	5	370	0	53	0	Baltimore, Md.	Seattle, Wash.	General	3,331	5,525	4,187
Munindes	5	4.15	5	12.10	5	19.30	6	416	0	21	0	Avonmouth, Eng.	Bluff, N. Z.	General	4,433	12,762	8,976
Palmas	2	16.40	5	12.00	5	19.32	5	116	0	58	2	Boston, Mass.	Buenaventura, Col.	General	2,400	10,491	7,460
Caldas	5	11.15	5	13.10	5	22.15	American	491	0	52	4	Boston, Mass.	Portland, Oreg	General	5,695	21	124
Virginian	5	13.45	5	14.10	5	22.55	5	400	0	52	4	Manchester, Eng.	Vancouver, B. C.	Ballast	5,699	4,126	10,491
Tiberion	5	15.05	5	15.10	6	6.33	British	400	0	52	0	Montreal, Canada	Adelaide, Australia	General	4,201	6,228	4,491
Caudan	4	16.50	5	20.25	6	9.39	6	462	0	61	0	Hamburg, Germany	Vancouver, B. C.	General	3,852	9,139	6,066
Portland	3	18.25	6	6.00	6	13.14	6	390	0	54	2	Boston, Mass.	Puget Sd., Wash.	General	3,631	298	1,572
Vega	30	15.20	6	6.00	6	14.00	6	227	0	34	4	Cristobal, C. Z.	Guayaquil, Ecuador	General	298	14,538	4,480
Cerigo	4	14.25	6	7.10	6	14.46	6	550	0	72	0	Norfolk, Va.	Seattle, Wash	Ballast	2,300	6,625	4,841
Chilore	6	00.35	6	9.55	6	17.02	6	410	0	54	2	New London, Conn.	Vancouver, B. C.	Steel, etc.	8,289	7,611	5,450
Sea Thrush	6	3.40	6	10.19	6	18.01	6	424	0	56	2	Mobile, Ala	Vancouver, B. C.	General	1,794	5,726	4,086
Steel Trader	5	20.20	6	12.35	6	19.00	7	360	2	51	5	New York, N. Y.	Valparaiso, Chile.	General	1,794	5,726	4,086
Santa Teresa	5	20.20	6	12.35	6	19.00	7	360	2	51	5	New York, N. Y.	Valparaiso, Chile.	General	1,794	5,726	4,086

° Auxiliary. 7 Iron, steel, and general. THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Pat Doherty	31	21.59	31	6.16	31	13.55	American	430	0	59	2	Los Angeles, Calif.	Baltimore, Md.	Gasoline	9,105	7,773	5,634
Benjamin Franklin	31	00.15	31	7.16	31	15.25	1	452	0	59	5	Vancouver, B. C.	Oslo, Norway	General	8,437	9,081	6,140
President	31	00.15	31	7.16	31	15.25	1	452	0	59	5	Vancouver, B. C.	Oslo, Norway	General	8,437	9,081	6,140
Grant	31	4.22	31	7.37	31	15.55	31	517	0	72	2	Manila, P. I	New York, N. Y.	General	4,128	15,234	10,470
Fairfield	31	6.45	31	8.09	31	16.55	31	369	2	48	2	Auckland, Pa.	Philadelphia, Pa.	Sugar	4,080	3,363	2,119
Atlantic Maru	31	19.25	1	6.35	1	13.50	1	385	0	51	0	Pulapandan, P. I	N. Atl., U. S. ports	Rump, sugar	7,800	3,251	4,700
Defiance	1	7.15	1	14.28	1	21.50	2	456	1	56	0	Cebu, P. I	New York, N. Y.	Rump, general.	8,644	8,333	5,001
Salvador	1	18.40	1	19.30	2	11.15	2	215	0	33	5	Champorico, Guat.	Cristobal, C. Z.	General	2,265	2,270	735
Dakotan	2	1.56	2	6.06	2	13.40	2	407	7	53	7	Portland, Oreg.	Boston, Mass.	General	5,512	1,156	5,094
Paul	2	3.00	2	6.49	2	14.30	2	471	1	59	2	Portland, Oreg.	Boston, Mass.	General	8,129	9,027	6,539
Luckenbach	2	2.30	2	7.34	2	15.25	2	473	6	64	5	Los Angeles, Calif.	Curacao, D. W. I.	Gasoline	12,491	9,625	6,859
Languager	2	00.25	2	8.04	2	16.40	2	116	0	21	0	Buenaventura, Col.	Cristobal, C. Z.	General	247	211	124
Caldas	2	20.25	2	8.17	2	16.50	2	369	9	51	24	Vancouver, B. C.	Gibraltar	Wheat	7,215	5,179	3,928
Trevethoe	2	8.05	2	9.08	2	18.10	2	411	0	54	5	Vancouver, B. C.	Avonmouth, Eng.	Wheat	9,000	6,512	4,065
Indian City	2	17.15	2	18.07	3	10.50	3	414	4	55	7	Vancouver, B. C.	Glasgow, Scotland	General	5,743	7,424	4,598
Cortona	2	17.15	2	18.07	3	10.50	3	414	4	55	7	Vancouver, B. C.	Glasgow, Scotland	General	5,743	7,424	4,598

° Motor ship. * Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.	
Kwanto	2	20	40	3	6	12	3	13	25	Osaka Shosen Kaisha.	460	0	61	6	22	3	Silk, general.	4,473	9,407	6,777
Maru 10.	2	21	00	3	6	55	3	13	55	N. Z. Shipping Co.	460	5	62	7	23	0	Frozen, Scotland.	5,431	10,817	7,562
Tongarua	3	00	30	3	7	18	3	14	55	McCormick S. S. Co.	409	6	50	1	25	0	Frozen, general.	8,283	6,627	4,983
Alasroka	3	00	30	3	7	18	3	14	55	McCormick S. S. Co.	409	6	50	1	25	0	Frozen, general.	8,283	6,627	4,983
Pacific	3	00	30	3	7	18	3	14	55	McCormick S. S. Co.	409	6	50	1	25	0	Frozen, general.	8,283	6,627	4,983
Pioneer 10.	3	1	00	3	8	10	3	15	25	Furness, Withy & Co.	435	9	64	2	28	0	General.	8,582	9,630	6,943
Este	3	5	30	3	8	45	3	16	00	North German Lloyd	495	3	63	8	27	0	General.	10,831	9,965	6,656
Canadian	3	6	15	3	9	28	3	17	00	Can. Nat. Steamships	400	4	52	3	23	0	Lumber.	5,145	5,879	4,121
Ranger	3	6	00	3	9	56	3	17	55	Johnson Line	426	9	52	7	27	0	General.	7,627	7,501	5,661
Buenos Aires 10.	3	18	40	3	19	25	4	10	55	R. Chapman & Son	409	6	54	0	26	0	Stockholm, Sweden	8,276	5,761	4,129
Riverton	4	2	30	4	6	10	4	15	20	Ore S. S. Corp.	549	6	72	2	35	0	Wheat, oats	21,700	14,325	4,635
Leban	4	2	30	4	6	10	4	15	20	Ore S. S. Corp.	549	6	72	2	35	0	Wheat, oats	21,700	14,325	4,635
Port Hobart 10.	3	20	55	4	6	23	4	17	05	Com'ith & Dom. Line.	466	9	59	7	27	0	Iron ore	5,655	10,041	7,271
Ampullaria	3	15	45	4	7	47	4	18	00	Anglo-Saxon Pet. Co.	412	5	53	8	25	0	Frozen, general.	7,434	6,290	4,369
Axel Johnson 10.	4	2	05	4	8	14	4	16	40	Johnson Line	392	9	52	6	25	2	Benzine	5,998	6,642	4,860
Senota 10.	4	0	05	4	8	38	4	16	20	U. S. Navy	155	0	30	0	27	0	General	7,298	8,864	5,260
Heraiger 10.	4	0	05	4	8	38	4	16	20	U. S. Navy	155	0	30	0	27	0	General	7,298	8,864	5,260
Levant Arrow	4	1	45	4	9	28	4	18	10	Interocean Line	398	1	52	9	27	0	Gasoline.	11,222	9,841	6,948
Manizales	4	1	45	4	9	28	4	18	10	Standard Transp. Co.	498	3	52	7	28	0	General.	8,124	1,132	741
Barnveld	4	1	30	4	9	50	4	18	30	Roland Line	216	3	52	9	33	0	General.	8,124	1,132	741
Suevier	4	1	30	4	9	50	4	18	30	Roland Line	216	3	52	9	33	0	General.	8,124	1,132	741
Cauea 10.	4	1	30	4	9	50	4	18	30	Roland Line	216	3	52	9	33	0	General.	8,124	1,132	741
Huertford	4	1	30	4	9	50	4	18	30	Roland Line	216	3	52	9	33	0	General.	8,124	1,132	741
Carrao 10.	4	1	30	4	9	50	4	18	30	Roland Line	216	3	52	9	33	0	General.	8,124	1,132	741
Laika	4	1	30	4	9	50	4	18	30	Roland Line	216	3	52	9	33	0	General.	8,124	1,132	741
Kansa	4	1	30	4	9	50	4	18	30	Roland Line	216	3	52	9	33	0	General.	8,124	1,132	741
Lake Benbow	4	1	30	4	9	50	4	18	30	Roland Line	216	3	52	9	33	0	General.	8,124	1,132	741
Kansan	4	1	30	4	9	50	4	18	30	Roland Line	216	3	52	9	33	0	General.	8,124	1,132	741
Nordhalv 10.	5	4	00	5	8	14	5	20	20	Dupont & Co.	369	0	53	9	26	0	Nitrates.	8,000	6,194	4,467
S-17 10.	5	4	00	5	8	14	5	20	20	Dupont & Co.	369	0	53	9	26	0	Nitrates.	8,000	6,194	4,467
City of Panama 10.	5	8	00	5	13	48	5	21	45	Panama Mail S. S. Co.	296	1	45	9	18	0	General	993	3,848	2,603
Cambrai	5	12	35	5	15	39	5	21	45	U. S. Army	448	0	58	0	26	0	Army supplies.	343		
Ipswich	5	14	30	5	15	54	5	21	45	U. S. Army	448	0	58	0	26	0	Army supplies.	343		
Badhill	6	1	45	6	6	47	6	16	00	Aregonat S. S. Line.	400	7	54	2	27	0	Lumber, general.	7,671	6,616	4,614
Madrivas City	6	1	45	6	6	47	6	16	00	Shell Eastern Pet. Co.	416	8	56	1	26	0	Gasoline.	9,000	6,721	4,680
Marian Otis	6	1	45	6	6	47	6	16	00	J. W. Mitchell Co.	383	9	53	5	25	3	Wheat.	7,700	5,913	4,377
Chandler	6	6	33	6	7	47	6	17	25	Arrow Line	409	6	54	1	24	0	Lumber.	7,548	6,653	4,863
Heronspool	6	6	30	6	8	20	6	20	05	Can. Cooper. Wheat Co.	421	8	54	2	25	0	Wheat.	8,360	6,262	4,548
Point Chico	6	13	40	6	14	22	6	21	30	Swayne & Hoyt	386	0	52	2	22	0	Beaumont, Tex.	5,289	5,732	4,131

10 Motor ship.

11 Tug.

12 Submarine.

13 For orders.

14 Lumber, sugar, general.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 31	Iriona	United Fruit Co.	Port Limon via Bocas.	May 31	No. 300-N ¹⁵	Pan American-Graec Airways	Pimental via wayports.
May 31	Rugia	Hamburg-American Line	Tampico via wayports.	May 31	Iriona	United Fruit Co.	New Orleans, La.
May 31	No. 144-M ¹⁵	Pan American-Graec Airways	Pimental via wayports.	June 1	No. 670-M ¹⁵	Pan American Airways	Miami via wayports.
June 1	No. 9664 ¹⁵	Pan American Airways	San Salvador via wayports.	June 1	Rugia	Hamburg-American Line	Cartagena, Colombia.
June 1	Darien C-35 ¹⁵	Scadta Airplane Co.	Barranquilla via wayports.	June 2	Inapaquina ¹⁶	A. Tagaropolos	Colon, Rep. of Panama.
June 2	Metapan	United Fruit Co.	Santa Marta, Colombia.	June 3	Anacuana ¹⁶	Pan American Airways	Colon, Rep. of Panama.
June 2	Venezuela	Royal Netherlands S. S. Co.	Hamburg via wayports.	June 3	No. 669-M ¹⁵	Pan American Airways	Miami via wayports.
June 2	Inapaquina ¹⁶	Hamburg-American Line	Hamburg via wayports.	June 3	Metapan	United Fruit Co.	New York via Kingston.
June 2	A. Tagaropolos	A. Tagaropolos	Colon, Rep. of Panama.	June 3	Toutonia	Hamburg-American Line	Tampico via wayports.
June 2	No. 300-N ¹⁵	Pan American-Graec Airways	Colon, Rep. of Panama.	June 3	Venezuela	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
June 3	Cristobal	Panama R. R. S. S. Line	Pimental via wayports.	June 4	Carmelita ¹⁷	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.
June 3	Tela	United Fruit Co.	New York via Haiti.	June 4	Tela	United Fruit Co.	Port Limon via Bocas.
June 3	Staxola	United Fruit Co.	New Orleans, La.	June 4	No. 144-M ¹⁵	Pan American-Graec Airways	Pimental via wayports.
June 3	Atlantian	Leyland S. S. Line	Liverpool via Kingston.	June 4	Staxola	United Fruit Co.	Colombian ports.
June 3	No. 9688 ¹⁵	Pan American Airways	Miami via wayports.	June 4	Atlantian	Leyland S. S. Line	Merro de Santiago, Cuba.
June 3	Impeco ¹⁷	Colon Import & Export Co.	San Salvador & wayports.	June 5	Darien C-35 ¹⁵	Scadta Airplane Co.	Barranquilla & wayports.
June 4	Carmelita ¹⁷	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	June 5	Arnetta I. ¹⁶	P. W. Hamilton	Colon, Rep. of Panama.
June 4	Tolosa	Contessa	Colon, Reps. of Panama.	June 5	Caruaru	Elders & Fyffes, Ltd.	Avonmouth via wayports.
May 5	Venezuela	United Fruit Co.	New Orleans via Habana.	June 5	Tolosa	United Fruit Co.	New York via wayports.
June 5	Caruaru	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	June 5	Martinique	Colombian S. S. Line	New York via Kingston.
June 5	Thille Lykes	Elders & Fyffes, Ltd.	New York via wayports.	June 6	Contessa	Standard Fruit & S. S. Co.	New Orleans & wayports.
June 5	Arnetta I. ¹⁶	P. W. Hamilton	Avonmouth via wayports.	June 6	Tela	United Fruit Co.	New Orleans, La.
June 5	Thille Lykes	Lykes Brothers S. S. Co.	Houston, Tex.	June 6	Thille Lykes	Lykes Brothers S. S. Co.	Santo Domingo & wayports.
June 6	Tela	United Fruit Co.	Port Limon, Costa Rica.	June 6	Venezuela	Royal Netherlands S. S. Co.	Amsterdam & wayports.
June 6	No. 9670 ¹⁵	Pan American Airways	San Salvador & wayports.				
June 6	No. 670-M ¹⁵	Pan American Airways	Miami via wayports.				
June 6	No. 144-M ¹⁵	Pan American-Graec Airways	Pimental via wayports.				

PORT OF BALBOA.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
June 2	Amalthus ¹	Texas Corporation	Los Angeles, Calif.	June 4	Amalthus ¹	Texas Corporation	Los Angeles, Calif.
June 3	Saramacca	United Fruit Co.	San Francisco, Calif.	June 4	Saramacca	United Fruit Co.	San Francisco, Calif.
June 5	Nueva Panama ¹⁸	Haus Elliott	Panama Bay, R. P.	June 5	Nueva Panama ¹⁸	Haus Elliott	Panama Bay, R. P.
June 5	Sambu ¹⁹	Haus Elliott	Panama Bay, R. P.	June 5	Sambu ¹⁹	Haus Elliott	Panama Bay, R. P.
June 5	Real ¹⁹	Haus Elliott	Panama Bay, R. P.	May 5	Real ¹⁹	Haus Elliott	Panama Bay, R. P.
June 5	A. B. Obarrío ¹⁹	A. Valdez	Panama Bay, R. P.	June 5	A. B. Obarrío ¹⁹	A. Valdez	Panama Bay, R. P.
June 5	Dos Hermanos ¹⁹	A. Valdez	Panama Bay, R. P.	June 5	Dos Hermanos ¹⁹	A. Valdez	Panama Bay, R. P.

* Other than ships passing through the Canal.

¹ Tanker. ¹⁸ Motor ship. ¹⁹ Motor schooner.

¹⁵ Air mail carrier. ¹⁶ Motor boat. ¹⁷ Motor schooner.

**Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Cristobal, C. Z., for Week Ending June 6, 1931.**

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Rugia	Hamburg-American Line		June 1		659
Benjamin Franklin	Fred Olsen S. S. Line		June 1		618
El Salvador	Panama Mail S. S. Co.	June 1	June 1	189	263
Albert Vogler	Hamburg-American Line	June 1	June 1	99	88
Narenta	Royal Mail Steam Packet Co.	June 1	June 1	250	(²)
Defance	Roosevelt S. S. Co.	June 1	June 2	254	(²)
Metapan	United Fruit Co.	June 2	June 3	76	877
Teutonia	Hamburg-American Line	June 2	June 3	83	71
Venezuela	Royal Netherlands S. S. Co.	June 2	June 3	56	6
Salvador	Pacific Steam Navigation Co.	June 2		294	
Caldas	National Navigation Co.	June 2	June 5	379	65
Kwanto Maru	Osaka Shosen Kaisha	June 3	June 3	134	221
Este	North German Lloyd	June 3	June 3	3	(²)
Tela	United Fruit Co.	June 3	June 3	954	28
Atlantian	Leyland S. S. Line	June 3	June 4	338	(²)
Buenos Aires	Johnson S. S. Line	June 3	June 4	(²)	244
Annie Johnson	Johnson S. S. Line	June 3	June 4	41	77
Sixaola	United Fruit Co.	June 3	June 4	301	549
Cristobal	Panama R. R. S. S. Line	June 3		3,671	
Heranger	Westfal, Larsen & Co.	June 4	June 4	(²)	18
Axel Johnson	Johnson S. S. Line	June 4	June 4	42	(²)
Manizales	Roland Line	June 4		948	
Portland	Hamburg-American Line	June 4	June 5	158	104
Teno	Chilean S. S. Line	June 4	June 5	(²)	11
Carare	Elder & Fyffes, Ltd.	June 5	June 5	(²)	3
Cauca	National Navigation Co.	June 5		298	
Tolosa	United Fruit Co.	June 5	June 5	248	232
Martinique	United Fruit Co.	June 5	June 5	30	337
Barneveld	Royal Netherlands S. S. Co.	June 5	June 5	32	(²)
Venezuela	Royal Netherlands S. S. Co.	June 5	June 6	2	489
Confessa	Standard Fruit & S. S. Co.	June 5	June 6	232	302
Santa Teresa	Grace Line	June 5	June 6	249	370
Tillie Lykes	Lykes Brothers	June 5	June 6	649	148
City of Panama	Panama Mail S. S. Co.	June 5		998	
Cerigo	Hamburg-American Line		June 6		258
Tela	United Fruit Co.	June 6	June 6	10	429

¹ No cargo discharged.² No cargo laded.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective June 8, 1931.

Commodities.	Unit.	Price.
Brass, bar, average	Lb.	\$0.24
Brass, sheet, average	Lb.	.24
Bronze, Tobin, average	Lb.	.24
Gasoline, motor grade	Gal.	.105
Metal, yellow	Lb.	.23
Oakum, Navy, spun	Lb.	.16
Oakum, Navy, unspun	Lb.	.15
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder	Gal.	.28
Oil, burning, Colza	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135	Gal.	.33
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250	Gal.	.45
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250	Gal.	.39
Oil, kerosene, in drums	Gal.	.07
Oil, marine engine	Gal.	.49
Paint, lead, white, dry	Lb.	.14
Paint, lead, white, in oil	Lb.	.11
Paint, zinc oxide, dry	Lb.	.10
Paint, zinc oxide, in oil	Lb.	.11
Grease, gear, chain and wire rope, lubricating	Lb.	.05
Grease, yellow, cup, No. 3	Lb.	.08
Grease, yellow, cup, No. 5	Lb.	.09
Soda, ash	Lb.	.03
Waste, cotton, colored	Lb.	.13
Waste, cotton, white	Lb.	.15

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., June 17, 1931. No. 46.

Cargo Through the Canal During May, 1931.

On pages 652 and 653 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in May, 1931. This cargo, segregated according to direction as compared with May, 1930, and the differences, are shown in the following tabulation:

	May, 1930.	May, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	681,073	519,844	-161,229
Pacific to Atlantic.....	1,580,543	1,405,608	-174,935
Total.....	2,261,616	1,925,452	-336,164

It will be noted from the above that the Atlantic to Pacific tonnage decreased 161,229 tons (23.7 per cent) in comparison with May, 1930, and that from the Pacific to the Atlantic decreased 174,935 tons (11.1 per cent), making a total decrease of cargo in both directions of 336,164 tons (14.9 per cent).

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-seven and seven-tenths (67.7) per cent of the cargo from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States and 21.1 per cent in Europe, these two areas contributing almost 89 per cent of the total cargo moving in this direction in May, 1931. In comparison with May, 1930, tonnage from the United States declined 84,259 tons (19.3 per cent), and that from Europe decreased 50,892 tons (31.8 per cent). The percentage of the total originating in the United States was somewhat higher in the past month than in May, 1930, while the proportion of the total coming from Europe was lower.

Destination.—Forty-seven (47) per cent of the Pacific-bound cargo was destined to the United States; 23.3 per cent to Asia; 11.4 per cent to South America; and 7.6 per cent to Australasia. Tonnage to all these areas decreased in comparison with May, 1930, as follows: To the United States, 47,882 tons (16.4 per cent); to Asia, 33,115 tons (21.5 per cent); to South America, 57,560 tons (49.1 per cent); and to Australasia, 31,413 tons (44.4 per cent). The proportion of the total cargo destined to the United States showed an increase in May, 1931, in comparison with May, 1930. There was also a slight increase in the proportion of the total destined to Asiatic ports. The percentage of the total destined to South America and Australasia showed rather a severe decrease in comparison with May, 1930. The heavy decrease in tonnage destined to South America was due principally to reduced shipments from Europe, which registered a decrease of 57.2 per cent. In the United States to South America trade a decrease of 35.3 per cent occurred. The heavy decrease in the movement to Australasia

was accounted for principally by the curtailed shipments from United States and Canada.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 46.7 per cent came from the United States; 20.5 per cent from South America; 15.1 per cent from Canada; 9.7 per cent from Asia; and 5.8 per cent from Australasia. Cargo from Canada showed a proportionate as well as an actual increase in tonnage in comparison with May, 1930, as did that originating in Asia. The actual increase in tonnage from Canada amounted to 21,897 tons (11.5 per cent) and that from Asia, 8,101 tons (6.3 per cent). Cargo from the other areas mentioned, decreased in actual tonnage as follows: From the United States, 103,669 tons (13.6 per cent); from South America, 117,930 tons (29.1 per cent); and from Australasia, 3,290 tons (3.9 per cent). In relation to the total cargo tonnage the amounts coming from the United States and South America showed decreases while that from Australasia was slightly higher. Reduced iron ore and nitrate shipments from Chile accounted for the larger part of the decline in cargo tonnage from South America, and smaller shipments of mineral oils and lumber in the tonnage from the United States. Larger wheat shipments accounted for the heavier tonnage from Canada.

Destination.—Segregated according to destination, 56.3 per cent of the cargo tonnage moving from the Pacific to the Atlantic went to the United States and 35.7 per cent to Europe. Tonnage to the United States decreased 138,314 tons (14.9 per cent) in comparison with May, 1930, and that to Europe declined 44,888 tons (8.2 per cent). In their proportions to the total cargo, the tonnages to both the United States and Europe were slightly lower in May, 1931, than in May, 1930.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify approximately 89 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific during the month of May, 1931. The remaining 11 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for May, 1930, or May, 1931, are listed in the following tabulation, showing differences:

Commodity.	May,	May,	Difference.
	1930.	1931.	
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Automobiles	10, 839	12, 439	+1, 600
Cement	33, 959	18, 812	-15, 147
Coal and coke	3, 787	12, 373	+8, 586
Cotton	6, 904	15, 385	+8, 481
Manufactured goods:			
Iron and steel	154, 153	109, 617	-44, 536
Machinery	10, 999	9, 054	-1, 945
Railroad material	12, 333	3, 410	-8, 923
Tinplate	28, 173	21, 492	-6, 681
Miscellaneous	20, 781	21, 433	+652
Metal, scrap	22, 052	1, 473	-20, 579
Oils, mineral	68, 885	32, 445	-36, 440
Paper	20, 335	15, 307	-5, 028
Phosphates	34, 242	44, 274	+10, 032
Sugar	14, 363	10, 170	-4, 193
Tobacco	8, 880	14, 303	+5, 423

The above 15 commodity groups for May, 1931, comprise 65.8 per cent of the total cargo moving from the Atlantic to the Pacific. Six of the items showed increases and 9 decreases.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify 98.8 per cent of all cargo moving from the Pacific to the Atlantic during the month of May, 1931. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1930 are listed below:

Commodity.	May, 1930.	May, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Asphalt.....	11,263	398	-10,865
Barley.....	26,065	9,356	-16,709
Beans.....	5,628	20,578	+14,950
Canned goods (fish, fruit, vegetables, etc.).....	33,581	51,895	+18,314
Coffee.....	16,301	15,949	-352
Cold storage (food products) ¹	27,903	26,560	-1,343
Copra.....	2,994	16,403	+13,409
Cotton.....	10,028	8,392	-1,636
Flour.....	7,944	16,727	+8,783
Fruit, dried.....	12,079	11,658	-421
Fruit, fresh.....	7,724	29,255	+21,531
Lumber.....	295,964	218,585	-77,379
Metals, various.....	55,016	46,398	-8,618
Nitrates.....	103,329	71,040	-32,289
Oats.....	3,912	19,269	+15,357
Oil, coconut.....	15,058	4,877	-10,181
Oils, mineral.....	408,980	314,546	-94,434
Ores, principally iron.....	174,340	98,325	-76,015
Rice.....	9,404	12,340	+2,936
Sugar.....	114,916	123,574	+8,658
Wheat.....	113,039	157,084	+44,045
Wool.....	18,479	26,331	+7,852

¹ Does not include fresh fruit.

The above 22 commodity groups for May, 1931, comprise 92.5 per cent of the cargo moving from the Pacific to the Atlantic. Ten of the items showed increases and 12 decreases. The majority of the increases were in food products.

(Continued on next page.)

Supplement No. 21.—Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 9, 1931.

The following additional regulations are hereby added to Chapter X, Exclusion of Chinese, of the Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters.

H. BURGESS,
Governor.

(These Regulations should be inserted in Chapter X, page 46, of "Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters.")

Regulation 138.1. The master of a vessel carrying Chinese as members of its crew shall have in his possession passports or other identification papers covering each Chinese seaman, giving the name of the seaman as shown on the articles, date and place of birth specifying the town or province, height, any distinguishing marks or characteristics, occupation and signature of the seaman in Chinese, also photograph and right thumb print of the seaman.

Regulation 138.2. Identification papers or passports of Chinese seamen shall be available for the inspection of the boarding officers upon the arrival of a vessel at a Canal Zone port and when such vessel remains in port 24 hours or more all Chinese identification papers shall be delivered to the Chief Customs Inspector for custody, to be returned to the master after his crew has been checked and found to be aboard prior to the sailing of the vessel.

Regulation 138.3. In the case of vessels arriving without proper passports or other identification papers for Chinese members of their crews, such Chinese seamen may be removed from such vessels and detained at the expense of the vessel in question in the local jail or quarantine station until such time as the vessel is ready to depart, or until the master has prepared and presented suitable identification papers covering the Chinese seamen.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, May, 1931.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										EUROPE.										Grand total.	Per cent of total cargo.		
	UNITED STATES.					C.R.Z.*					Total, North America.					Total, Europe.							East coast of South America.	Egypt.
	North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total, United States.	East coast of Canada.	East coast of Central America.	Cristobal, C. Z.†	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe. †	Total, Europe.				
NORTH AMERICA:																								
West coast of United States	465,317	4,223,222	984,492	524			1,226,299	829,523	579	78,965	2,006	272	2,368	18,503	6,868	438	5,205	15,118	129,832	9,752	656,164	46.7		
West coast of Canada	22,280		319	22,599	6,054		140	6,847	35,640	67,142	12,721	852	23,556	7,738	7,264	426	5,708	32,803	173,398	2,737	211,775	13.1		
W. coast Central America	153			153			5,638	4	6,095	14			123	1,488	20	701			2,856		8,951	0.6		
Bahob, C. Z.	21,387			133	21,520		66		21,520	842									842		66			
Hawaiian Islands																					22,362	1.6		
Total, North America	509,137	4,223,23	436,556	796	6,054		7,370,36	680,586	900,146	949,17	839,2	1,243,1	24,047	28,179	14,152	6,864	11,704	48,011	306,923	5,489	899,318	64.0		
SOUTH AMERICA:																								
Chile	94,265	17,429	8,217	119,911			499	1,068	121,478	17,753	6,320		2,851	9,262	1,674	998	3,408	22	45,651	87,939	12	209,429	14.9	
Colombia	4,425		282	4,707			3,243	7,950		8					30					38		7,988	0.6	
Ecuador	9,010			9,010			3,008	12,018		1				37	366			55		459		12,477	0.9	
Peru	6,072			6,072	551		46	43,669	9,510	342	46		57	1,984	12	17			1,917	13,885	380	57,934	4.1	
W. coast South America †	70			70			40	3	113	33									3	36		149		
Total, South America	113,842	17,429	8,499	139,770	37,551		6,836	1,071	185,228	27,297	6,670	46	2,905	11,283	1,686	1,411	3,408	77	47,571	102,357	392	287,977	20.5	
AUSTRALASIA:																								
Australia	1,030			1,030	770			1,800	4,000				2,200		1,960				1,500	5,500		7,300	0.5	
New Zealand					346			346	57,80				5,330							61,412		61,758	4.4	
Australasia †																				7,396	12,806	12,806	0.9	
Total, Australasia	1,030			1,030	1,116			2,146	61,332				7,530		1,960				8,896	79,718		81,804	5.8	
ASIA:																								
Philippine Islands	67,861		29,831	97,692			8	97,700														97,700	6.9	
China	7,683		244	7,927			1,009	169	9,105													9,105	0.7	
Japan	7,149			7,149			123	603	7,875													7,875	0.6	
Far East †	752			752				7,555	8,507				7,300							5,962	13,262	21,769	1.5	
Total, Asia	83,445		30,075	113,520			1,140	8,527	123,187				7,300							5,962	13,262	136,449	9.7	
Grand total	707,454	21,652	62,010	791,116	44,721		15,346	46,278	897,460	285,578	24,509	9,470	41,485	39,462	17,798	8,275	15,172	77	110,440	502,566	5,881	1,405,608	100.0	
Per cent of total cargo:																								
May, 1931	50.4	1.5	4.4	56.3	3.2		1.1	3.3	63.9	16.7	1.7	0.7	3.0	2.8	1.3	0.6	1.1		7.8	35.7	0.4	100.0		
May, 1930	53.6	1.8	3.5	58.9	2.5		1.2	1.3	63.9	16.2	0.7	0.7	2.5	2.3	1.4	0.7	0.7	0.5	9.6	34.6	0.1	100.0		
May, 1929	52.3	4.4	4.8	61.5	3.7	0.1	1.1	2.1	68.5	15.2	0.8		1.8	1.8	1.4	0.3	0.2	0.4	8.8	30.7	0.3	100.0		

* General cargo not routed so as to allow segregation between definite ports. † Includes both local and transit cargo.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, June 13, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Pacific	6	20.00	7	6.00	7	12.23	7	13.36	British.	Furness, Withy & Co.	435.0	60.3	18.7	Glasgow, Scotland	Vancouver, B. C.	General.	822	9,725	6,942
Ranger ²	7	4.35	7	7.10	7	14.19	7	15.50	American.	Jugoslav-Lloyd	403.0	52.0	13.0	Rotterdam, Holland	Chile.	Ballast.	5,926	4,189	
Tomlinson	7	6.10	7	8.20	7	15.18	7	19.55	American.	Isthmian S. S. Lines	424.2	56.2	27.5	Baltimore, Md.	Singapore, Sr. Set.	General.	8,406	7,698	5,509
Steel	7	11.35	7	11.45	7	19.20	7	19.30	British.	Anglo-Panad. Offshs.	406.7	52.2	19.4	Philadelphia, Pa.	La Libertad, Ecua	Ballast.	6,046	4,326	
Traveler.	7	12.15	7	12.50	7	19.15	7	23.00	British.	Bank Line, Ltd.	497.6	57.4	26.0	Tampa, Fla.	Shanghai, China.	Phosp'te, cotton.	7,700	6,623	5,412
El Ciervo	7	18.25	7	18.45	8	9.37	8	10.44	American.	The Texas Co.	416.8	56.0	18.0	Providence, R. I.	Los Angeles, Calif.	Ballast.	6,775	4,841	
Lossibank ²	7	18.25	7	18.45	8	9.37	8	10.44	American.	The Texas Co.	416.8	56.0	18.0	Providence, R. I.	Los Angeles, Calif.	Ballast.	6,775	4,841	
New York	7	18.25	7	18.45	8	9.37	8	10.44	American.	The Texas Co.	416.8	56.0	18.0	Providence, R. I.	Los Angeles, Calif.	Ballast.	6,775	4,841	
Bessemer	7	18.25	7	18.45	8	9.37	8	10.44	American.	The Texas Co.	416.8	56.0	18.0	Providence, R. I.	Los Angeles, Calif.	Ballast.	6,775	4,841	
City	7	20.55	8	6.10	8	13.30	8	14.45	American.	Isthmian S. S. Lines	424.0	56.0	21.6	Baltimore, Md.	Tacoma, Wash.	Steel, general.	5,370	7,611	5,450
S-11 ³	8	7.45	8	7.45	8	14.18	8	15.20	American.	U. S. Navy	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
Scotia ⁴	8	7.45	8	7.45	8	14.18	8	15.20	American.	U. S. Navy	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
San Rafael	8	21.55	8	9.30	8	13.23	8	14.55	American.	Quaker Line	149.3	30.0		Cristobal, C. Z.	Bethoa, C. Z.	Ballast.	2,737	6,484	4,675
Lycan.	8	6.30	8	9.50	8	17.11	8	18.43	British.	Alfred Holt & Co.	410.0	54.0	17.10	New York, N. Y.	Seattle, Wash.	General.	3,446	7,817	5,506
Europa	8	8.35	8	10.55	8	17.26	9	1.37	Danish.	East Asiatic Co.	455.4	56.3	23.0	Philadelphia, Pa.	Shanghai, China.	Gen. lub. oil	11,226	8,275	
Nodavia	8	13.40	8	15.45	8	22.38	9	00.04	British.	Donaldson Brothers	387.0	53.7	17.0	Copenhagen, Den.	Vancouver, B. C.	Passengers only	661	6,070	4,979
Shetland ²	8	16.45	8	17.15	9	11.22	9	12.53	Norwegian.	Fern Line	378.0	54.0	24.0	Glasgow, Scotland	Vancouver, B. C.	General	7,046	6,070	4,534
Wiegand	8	16.45	8	17.15	9	11.22	9	12.53	Norwegian.	Fern Line	378.0	54.0	24.0	Port Tampa, Fla.	Yokohama, Japan	()	1,444	6,573	4,629
Fisher	8	16.45	8	17.15	9	11.22	9	12.53	Norwegian.	Fern Line	378.0	54.0	24.0	Port Tampa, Fla.	Yokohama, Japan	()	1,444	6,573	4,629
Lussie L. S.	8	20.20	9	8.35	9	15.54	10	16.45	British.	J. P. Gerry	61.2	18.6	6.0	Belize, Honduras	Vancouver, B. C.	Ballast		75	58
Willboro	9	8.20	9	8.40	9	16.10	9	17.25	American.	Williams S. S. Line	415.0	56.0	19.0	Baltimore, Md.	Seattle, Wash.	Steel, general.	3,713	7,717	5,763
American	9	11.20	9	11.50	9	19.34	9	20.30	American.	Amer.-Hawaiian Line	404.6	53.9	19.0	Boston, Mass	Seattle, Wash.	General	2,995	6,777	4,761
Wisconsin	9	3.45	9	13.05	9	20.02	9	21.11	French.	French Line	470.0	61.3	20.0	Antwerp, Belgium	Vancouver, B. C.	General	10,459	7,110	
Kwansai	9	13.05	9	13.45	9	20.45	9	21.40	Japanese.	Osaka Shosen Kaisha	461.0	61.0	21.11	Boston, Mass	Hongkong, China	Gen. tobacco	3,450	9,414	6,700
Maru ²	9	19.00	9	19.15	10	9.07	10	10.07	Danish.	Strang & Co	385.0	54.0	16.0	Baltimore, Md	Grays Har., Wash	Ballast.	6,736	5,064	
Guldborg	9	23.25	10	6.15	10	14.22	10	16.45	American.	Nelson Line	321.7	50.0	16.4	Baltimore, Md.	Seattle, Wash.	General	2,170	3,872	2,568
Castletown	9	23.25	10	6.15	10	14.22	10	16.45	American.	Nelson Line	321.7	50.0	16.4	Baltimore, Md.	Seattle, Wash.	General	2,170	3,872	2,568
Dorothy	10	00.25	10	6.25	10	13.31	10	14.45	American.	Luckenbach Line	448.9	60.2	24.6	Boston, Mass	Seattle, Wash.	General	5,800	9,294	6,861
Pacific	10	5.45	10	7.20	10	14.44	10	15.55	American.	Dimon S. S. Corp.	409.6	54.2	14.11	Philadelphia, Pa.	Seattle, Wash.	General	2,031	6,537	4,845
Redwood	9	23.10	10	7.10	10	14.46	10	19.48	Chilean.	Chilean Government	126.5	27.0	7.0	Greenock, England	Valparaiso, Chile.	Ballast.		393	78
Galvarino ⁴	10	6.20	10	7.30	10	15.40	10	21.06	Danzig.	W. Tankschiff Rhederi	520.0	70.0	21.9	Hamburg, Germany	Talara, Peru.	Ballast.	12,535	8,224	
Heinrich V.	2	11.15	10	8.55	10	16.47	10	18.05	British.	Pacific Steam Nav. Co.	215.0	33.5	15.8	Cristobal, C. Z.	Champerico, Guat.	General	880	1,270	735
Riedemann ²	10	6.20	10	7.30	10	15.40	10	21.06	Danzig.	W. Tankschiff Rhederi	520.0	70.0	21.9	Hamburg, Germany	Talara, Peru.	Ballast.	12,535	8,224	
Salvador	2	11.15	10	8.55	10	16.47	10	18.05	British.	Pacific Steam Nav. Co.	215.0	33.5	15.8	Cristobal, C. Z.	Champerico, Guat.	General	880	1,270	735
Constance	10	9.10	10	9.50	10	16.51	10	17.55	American.	Arrow Line	409.6	54.2	20.6	Hamburg, Germany	Seattle, Wash.	General	3,915	6,621	4,891
Chandler	9	18.30	10	11.50	10	13.38	10	19.48	Dutch.	Royal Nederl. S. S. Co.	347.6	48.2	16.4	Philadelphia, Pa.	Cornal, Chile.	General	2,158		
Orustes	9	18.30	10	11.50	10	13.38	10	19.48	Dutch.	Royal Nederl. S. S. Co.	347.6	48.2	16.4	Philadelphia, Pa.	Cornal, Chile.	General	2,158		

¹ Tanker.

² Motor ship.

³ Submarine.

⁴ Tug.

⁵ Motor schooner.

⁶ Phosphate, cotton, and general.

Indian ¹	10	13	15	10	13	20	10	20	12	10	21	06	Danish.....	391.0	53.0	15.0	Stettin, Germany.....	Vancouver, B. C.....	Ballast.....	6,172	4,356
Canada ²	5	11	35	10	14	30	10	20	52	10	23	30	Colombian.....	107.0	23.0	7.6	Cristobal, C. Z.....	Buenaventura, Col.....	General.....	80	262
Oriota.....	10	13	20	11	6	10	11	13	48	11	15	05	British.....	550.3	67.4	27.1	Liverpool, England.....	Talcahuano, Chile.....	General.....	2,498	16,844
Australia.....	10	14	40	11	6	15	11	13	57	11	13	40	British.....	410.0	55.0	19.3	Newcastle, Eng.....	Vancouver, B. C.....	General.....	4,339	7,031
Jaucaico ³	10	14	50	11	6	15	11	14	50	11	15	50	British.....	399.0	52.0	25.0	Hull, England.....	Corral, Chile.....	General.....	5,772	6,759
Jaqueco ⁴	11	2	00	11	7	25	11	14	44	11	18	00	Chilean.....	326.0	27.0	11.00	Greenock, England.....	Valparaiso, Chile.....	Ballast.....	393	78
Calagrotite.....	11	2	00	11	7	25	11	15	15	11	16	45	British.....	521.3	70.4	24.0	Montreal, Canada.....	Talara, Peru.....	Ballast.....	12,339	3,771
Langketchan.....	11	6	40	11	8	25	11	16	38	11	18	25	British.....	416.0	56.0	14.0	Newcastle, Eng.....	Vancouver, B. C.....	Ballast.....	6,671	4,817
Chr. Knudsen.....	11	11	05	11	11	15	11	18	19	11	19	30	Norwegian.....	351.2	54.7	22.0	Fort Tampa, Fla.....	N. Westminster, B. C.....	(?).....	6,835	6,083
Onondaga.....	11	11	40	11	12	00	11	19	11	12	4	25	American.....	282.0	43.5	18.0	Chester, Pa.....	Portland, Ore.....	(?).....	2,280	2,656
Knut Nelson.....	11	5	50	11	14	20	11	20	25	12	1	20	Norwegian.....	436.0	56.0	16.0	Göthenburg, Swed.....	Vancouver, B. C.....	Bananas.....	131	8,016
Lukenbach.....	11	14	50	11	15	00	11	21	10	11	22	10	American.....	434.3	57.7	20.6	Houston, Tex.....	Tacoma, Wash.....	General.....	3,452	7,982
Manizales.....	4	19	30	11	15	20	11	22	06	11	23	18	German.....	216.5	32.9	12.0	Cristobal, C. Z.....	Buenaventura, Col.....	General.....	300	1,132
Liverpool.....	11	15	50	11	18	50	12	8	58	12	10	28	Japanese.....	855.0	51.0	18.4	Newport News, Va.....	Shanghai, China.....	Tobacco.....	1,831	5,919
Santa Barbara.....	11	11	10	12	6	20	12	13	11	12	20	45	American.....	466.0	64.0	24.6	New York, N. Y.....	Talcahuano, Chile.....	General, bananas.....	1,792	10,087
President.....	12	5	20	12	6	22	12	13	22	12	13	26	American.....	502.2	62.1	28.0	New York, N. Y.....	San Francisco, Cal.....	General.....	2,955	12,660
Pok.....	12	2	45	12	7	10	12	15	39	12	16	45	American.....	324.0	46.2	20.0	Corpus Christi, Tex.....	Seattle, Wash.....	General.....	2,933	3,984
Point Bonita.....	12	6	00	12	7	30	12	14	58	12	16	00	British.....	451.0	61.0	20.0	New York, N. Y.....	Seattle, Wash.....	General.....	2,033	2,617
Silverpalm.....	10	20	35	12	8	38	12	15	54	12	17	05	American.....	315.0	44.2	17.11	Cristobal, C. Z.....	Panama, S. C.....	General.....	2,580	9,308
San Mateo.....	12	15	55	13	6	10	13	13	28	13	14	40	Swedish.....	501.0	72.2	21.5	New York, N. Y.....	San Francisco, Cal.....	Ballast.....	3,496	2,141
Svealand.....	12	23	50	13	6	25	13	13	53	13	15	15	American.....	468.3	63.0	18.0	New York, N. Y.....	Cruz Grande, Chile.....	Ballast.....	15,425	4,421
Dixie Arrow.....	13	1	30	13	7	20	13	14	51	13	16	20	Japanese.....	445.0	58.0	22.10	Houston, Tex.....	Los Angeles, Calif.....	Ballast.....	9,744	7,140
Taketoyo Maru.....	13	6	15	13	7	30	13	14	58	13	16	20	American.....	395.0	55.0	18.0	Baltimore, Md.....	Osaka, Japan.....	General, tobacco.....	6,751	7,972
Enslay City.....	13	9	45	13	10	00	13	16	19	13	17	15	American.....	429.0	23.0	18.5	Boston, Mass.....	Portland, Ore.....	General.....	7,574	7,330
Montanan.....	13	12	00	13	10	30	13	17	21	23	21	20	Italian.....	430.0	55.0	19.4	Trieste, Italy.....	Portland, Ore.....	General.....	3,056	6,775
Rialto.....	13	12	00	13	12	05	13	18	15	13	22	55	British.....	430.0	53.0	13.0	Passage, Spain.....	Vancouver, B. C.....	General.....	1,647	7,789
Forstbank.....	13	12	00	13	12	05	13	18	15	13	22	55	British.....	430.0	53.0	13.0	Passage, Spain.....	Antofagasta, Chile.....	Ballast.....	7,097	5,022
John P.....	13	12	30	13	12	50	13	19	28	13	23	30	Norwegian.....	430.8	58.6	16.0	Hamburg, Germany.....	Los Angeles, Calif.....	Ballast.....	6,669	4,317
Pedersen.....	12	17	20	13	13	40	13	20	40	13	21	40	American.....	296.0	45.0	17.3	Pto. Colombia, Col.....	San Francisco, Cal.....	Coffee, general.....	897	3,948
Panama.....	12	17	20	13	13	40	13	20	40	13	21	40	American.....	296.0	45.0	17.3	Pto. Colombia, Col.....	San Francisco, Cal.....	Coffee, general.....	897	3,948

7 Sulphur, phosphate, and general. * Automobile parts and steel. THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Hanley.....	6	19	50	7	6	58	7	14	45	7	14	45	American.....	440.0	56.0	28.0	Longview, Wash.....	Newark, N. J.....	Lumber.....	9,597	8,310
Langsford.....	6	19	15	7	7	06	7	15	45	7	14	45	British.....	370.0	56.2	23.3	Longview, Wash.....	Falmouth, Eng.....	Wheat.....	7,050	5,195
Edger F.....	6	21	00	7	7	39	7	16	15	7	16	15	American.....	425.0	57.3	26.0	Portland, Ore.....	Mobile, Ala.....	General.....	5,329	8,568
Lukenbach.....	7	1	20	7	7	55	7	16	50	7	16	50	American.....	404.6	53.9	25.0	San Francisco, Cal.....	Boston, Mass.....	General.....	5,600	6,754
Oregonian.....	7	10	45	7	11	24	7	18	15	7	18	15	American.....	415.1	55.7	26.0	Seattle, Wash.....	Baltimore, Md.....	Lumber, general.....	7,336	7,731
Willapa.....	7	17	00	7	17	48	7	18	15	7	18	15	French.....	425.0	55.0	26.4	Corral, Chile.....	Le Havre, France.....	Lumber, general.....	8,285	6,982
Zenon.....	7	19	00	8	6	54	8	14	25	8	16	25	American.....	324.0	64.0	24.0	Seattle, Wash.....	Baltimore, Md.....	Lumber, general.....	4,000	3,984
Fort Armstrong.....	7	22	20	8	7	11	8	15	25	8	16	25	American.....	397.4	54.3	25.0	San Francisco, B. C.....	Rotterdam, Holland.....	Lumber, general.....	8,421	5,843
Holystein.....	8	4	20	8	7	11	8	15	25	8	16	25	American.....	483.3	63.0	25.0	San Antonio, Chile.....	New York, N. Y.....	General.....	4,415	11,680
Santa Clara.....	8	7	45	8	7	30	8	13	22	8	15	50	British.....	405.3	53.5	25.0	N. Westminster, B. C.....	Middlesbor', Eng.....	Lumber, general.....	7,450	5,741
Cape Cornwall.....	8	7	45	8	8	44	8	15	50	8	15	50	British.....	405.3	53.5	25.0	N. Westminster, B. C.....	Middlesbor', Eng.....	Lumber, general.....	7,450	5,741
Herman F.....	8	8	00	8	9	00	8	16	30	8	16	30	American.....	409.8	54.2	25.0	Everett, Wash.....	Poughkeepsie, N. Y.....	Lumber.....	7,300	6,581
Whitton.....	8	8	00	8	9	00	8	16	30	8	16	30	American.....	409.8	54.2	25.0	Everett, Wash.....	Poughkeepsie, N. Y.....	Lumber.....	7,300	6,581

⁹ For orders.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	N et.	
California	8	12 05	9	6 10	9	13 45	9	14 10	American...	Panama-Pacific Line...	574.4	80.3	29.0	San Francisco, Cal.	New York, N. Y.	General.	6,504	24,506	17,565	
El Lobo	8	21 30	9	6 33	9	14 50	9	15 45	British...	Chem. & Refin. Products	385.2	51.0	24.0	La Libertad, Ecua.	Pt. de Boue, Can. I.	Crude oil.	5,984	4,851	3,326	
Harry																				
Lukenbach.	9	5 00	9	7 20	9	15 55	9	15 55	American...	Lukenbach Line...	448.9	60.2	31.0	Seattle, Wash.	Boston, Mass.	Lumber, general.	8,318	9,262	6,853	
Tiel Maersk	9	6 50	9	8 03	9	17 00	9	17 55	British...	Isbrandtsen Moller Co	418.9	54.7	25.3	Iloilo, P. I.	New York, N. Y.	General.	7,484	7,410	5,523	
Treloste.	9	10 25	9	11 06	9	18 30	9	22 15	British...	Hain S. S. Co.	400.2	52.1	23.0	Vancouver, B. C.	Greece.	Wheat.	7,254	5,767	4,319	
S-15																				
S-14																				
Temple Pier	9	13 55	9	13 44	9	21 45	9	21 45	American...	U. S. Navy.	231.0	20.0	20.0	Balboa, C. Z.	Cristobal, C. Z.	...				
Vernor	9	14 20	9	15 54	9	23 10	9	20 35	British...	Temple S. S. Co.	300.0	53.0	22.0	Salsaverry, Peru	Liverpool, England	Sugar.	7,600	5,725	4,165	
Verona	9	12 30	9	15 25	9	23 25	9	23 25	American...	Calmar S. S. Corp.	410.5	54.2	24.0	Portland, Ore.	Philadelphia, Pa.	Lumber.	7,200	6,585	4,791	
Acconagua	9	22 45	10	6 32	10	13 05	10	13 05	American...	Panama Mail S. S. Co.	380.6	48.2	24.0	San Francisco, Cal.	New York, N. Y.	General.	3,287	5,928	4,178	
Lake Ormat	9	18 55	10	7 18	10	15 45	10	15 45	Chilean...	For. American S. S. Co.	422.8	56.2	23.0	Valparaiso, Chile	New York, N. Y.	General.	1,171	7,764	4,705	
Indra	10	4 00	10	8 16	10	17 30	10	20 45	American...	Knut Knutsen.	275.8	43.8	20.0	Cook Bay, Oreg.	Brooklyn, N. Y.	General.	2,500	2,758	1,741	
Colombia	10	10 30	10	11 40	10	19 00	10	20 40	Danish...	Orion S. S. Co.	375.0	51.4	22.0	Corral, Chile	Stockholm, Sweden	General.	6,254	5,456	3,797	
San Marco.	10	8 50	10	14 12	10	20 35	10	23 38	American...	United Fruit Co.	313.2	44.2	20.8	Kolschbang, Siam.	Nuevitas, Cuba	Rice.	8,500			
Adolf von																				
Bayer.	10	13 30	10	14 19	10	21 50	10	1 10	German...	Hamburg-American Line	409.1	53.1	22.0	San Vicente, Chile	Hamburg, Germany	General.	6,071	7,173	5,504	
San Roberto	11	1 30	11	6 05	11	13 50	11	16 45	British...	Eagle Oil Shipping Co.	407.1	52.2	25.6	Pt. San Luis, Calif.	Lizards, Eng.	Gasoline.	7,321	6,233	4,550	
Oakland	11	5 00	11	6 57	11	15 05	11	23 45	German...	Hamburg-American Line	451.3	59.2	25.0	Vancouver, B. C.	Hamburg, Germany	General.	10,762	8,318	5,076	
Fosta	11	2 10	11	7 29	11	16 30	11	18 40	Norwegian...	Anglo-Saxon Pet. Co.	469.6	62.0	14.0	Los Angeles, Calif.	Lands End, Eng.	Kerosene.				
Mahlin	11	6 10	11	7 48	11	15 40	12	12 15	British...	Lady Anne Hen to Yale	312.0	36.2	14.0	Los Angeles, Calif.	England	Ballast.				
Port Hunter	11	21 00	11	8 23	11	18 15	11	18 15	British...	Comth & Dom. Line.	481.2	62.0	25.0	Auckland, N. Z.	London, England	General.	5,941	11,170	8,208	
Kinderdijk.	11	7 30	11	8 55	11	19 25	12	00 10	Dutch...	Holland-America Line.	469.4	58.3	27.0	Victoria, B. C.	Rotterdam, Holl'd.	General.	9,683	8,515	6,060	
S-16																				
S-17																				
Clearson.	11	10 45	11	11 21	11	19 35	11	20 10	American...	U. S. Navy.	231.0	20.0	20.0	Balboa, C. Z.	Cristobal, C. Z.	...				
Durazzo.	11	10 45	11	12 37	11	20 10	11	20 10	British...	R. Chapman & Son.	400.0	52.3	25.0	Vancouver, B. C.	London, England.	General.	7,537	5,710	4,164	
Pacific Cedar.	11	5 37	11	14 38	11	19 55	12	16 15	German...	Hamburg-American Line	237.5	34.4	12.0	Guanayacu, Perua	Cristobal, C. Z.	General.	436	1,682	1,041	
Amerikland	11	10 30	11	16 54	12	13 05	12	13 05	American...	Dimon S. S. Corp.	400.0	54.7	25.2	Bellingham, Wash.	New York, N. Y.	Lumber, general.	7,560	6,138	4,353	
M. F. Elliott	12	3 00	12	6 09	12	13 45	12	13 45	Swedish...	Ore S. S. Corp.	561.0	72.0	33.5	Cruz Grande, Chile	Baltimore, Md.	Iron ore.	21,660	15,560	4,496	
Wyoming	12	3 15	12	6 40	12	14 35	13	1 53	American...	Shell Petroleum Corp.	483.5	57.2	26.0	Los Angeles, Calif.	Fall River, Mass.	Gasoline.	9,449	7,481	4,927	
Barak.	12	4 30	12	7 50	12	15 10	12	15 10	British...	French Line.	493.5	66.2	27.0	Vancouver, B. C.	Le Havre, France.	General.	7,253	10,440	7,027	
Colonial.	12	10 10	12	10 36	12	17 30	14	8 30	Dutch...	T. & J. Harrison.	396.0	52.6	23.0	N.Westm'ter, B. C.	Liverpool, England	General.	6,899	5,753	3,893	
Remuera	12	21 30	12	12 45	12	19 20	12	19 20	British...	Royal Neth. S. Co.	202.9	33.1	12.9	Buenaventura, Col.	Cristobal, C. Z.	General.	4,479	11,911	8,945	
Caldas	12	14 20	12	15 01	12	22 10	12	22 10	Colombian...	N. M. Shipping Co.	415.0	62.3	24.0	Auckland, N. Z.	Southampton, Eng.	Frozen, general.	3,441	8,279	5,404	
Galle	12	19 30	12	20 06	13	11 35	13	15 50	British...	Com. Nac. de Navig...	185.0	21.1	10.4	Buenaventura, Col.	Cristobal, C. Z.	General.	239	211	124	
Emilie L. D.	12	21 15	12	20 13	13	13 45	13	15 35	French...	White Star Line.	450.0	58.5	22.0	Lyttelton, N. Z.	London, England.	Frozen, general.	7,958	6,512	4,724	
Point Arena.	12	23 09	13	6 47	13	14 50	13	14 50	American...	Louis Dreyfus & Co.	324.0	46.2	23.0	Vald'vok, U.S.S.R.	Avonmouth, Eng.	Soy beans.	3,665	3,984	2,612	

¹⁵ Lumber, copper, lead, and asphalt.

¹⁶ Lumber and automobile parts.

¹⁷ For orders.

¹⁸ Yacht.

¹⁹ Shipmarine.

²⁰ Motor ship.

²¹ Coffee, cacao, and tagua.

²² Wheat, lumber, flour, and general.

²³ Shipmarine.

²⁴ Shipmarine.

²⁵ Motor ship.

²⁶ Coffee, cacao, and tagua.

West Mahwah.....	13	3.30	13	7.20	13	16.00	13	16.00	American.....	Pac.-Arg.-Brazil Line.....	410.0	54.0	25.0	Seattle, Wash.....	Santa Fe, Arg.....	7.200	6.588	5.049
Texas.....	13	6.27	13	8.00	13	17.05	13	17.05	American.....	Amer.-Hawaiian Line.....	471.0	57.2	27.0	Seattle, Wash.....	Boston, Mass.....	8.705	6.588	5.049
Slijestad 20.....	13	6.55	13	8.20	13	17.35	13	17.35	Norwegian.....	Fern Line.....	376.5	53.8	25.0	Dairen, Manchuria.....	Stettin, Germany.....	7.124	6.204	4.706
Sagadahoc.....	13	9.25	13	10.15	13	18.15	13	18.15	American.....	Argonaut S. S. Co.....	420.5	54.2	26.0	Seattle, Wash.....	New York, N. Y.....	7.200	7.346	5.357
Hawaiian.....	13	16.40	13	17.28	14	11.05	14	12.05	American.....	Amer.-Hawaiian Line.....	404.6	53.9	25.0	Astoria, Oreg.....	Boston, Mass.....	4.443	6.760	4.767

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.										* DEPARTURES.									
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—												
June 8.....	Cuba.....	French Line	Havre via wayports.	June 7.....	No. 9688 18	Pan American Airways	San Salvador and wayp'ts.												
June 8.....	Darien C-35 18	Scandia Airplane Co.	Barranquilla and wayp'ts.	June 7.....	No. 300-N 18	Pan American Airways	Panama via wayports.												
June 8.....	Pearl Marie 19	G. I. Bryan	Colon, Rep. of Panama.	June 7.....	No. 608-N 18	Pan American Airways	Miami via wayports.												
June 9.....	Orinoco.....	Hamburg-American Line	Hamburg via wayports.	June 8.....	Cristobal	Panama R. R. S. S. Line.	New York via Haiti.												
June 9.....	Stxola.....	United Fruit Co.	Santa Maria, Colombia.	June 8.....	Pearl Marie 19	G. I. Bryan	Bluefields, Nicaragua.												
June 9.....	No. 300-N 18	Pan American Airways	Panama via wayports.	June 9.....	Orinoco	Hamburg-American Line.	Port Limon, Costa Rica.												
June 9.....	Esfuerzo 19	J. Asmusen	Colon, Rep. of Panama.	June 9.....	No. 670-M 18	Pan American Airways	Miami via wayports.												
June 9.....	Imapaquina 20	A. Tagaropolos	Colon, Rep. of Panama.	June 10.....	No. 9670 18	Pan American Airways	San Salvador and wayp'ts.												
June 9.....	Andahuana 20	A. Tagaropolos	Colon, Rep. of Panama.	June 10.....	Andahuana 20	A. Tagaropolos	Colon, Rep. of Panama.												
June 10.....	Zacapa.....	United Fruit Co.	New York via Kingston.	June 10.....	Imapaquina 20	A. Tagaropolos	Colon, Rep. of Panama.												
June 10.....	No. 9685 18	United Fruit Co.	New Orleans, La.	June 10.....	Esfuerzo 19	J. Asmusen	Colon, Rep. of Panama.												
June 10.....	No. 6085 18	United Fruit Co.	San Salvador and wayp'ts.	June 10.....	Stxola.....	United Fruit Co.	New York via wayports.												
June 10.....	No. 6085 18	Pan American Airways	Miami via wayports.	June 10.....	Cuba.....	French Line.	Havre via wayports.												
June 10.....	Bridge town.....	Colombian S. S. Line.	New York via wayports.	June 10.....	Zacapa.....	United Fruit Co.	Colombian ports.												
June 11.....	Cefalu.....	Standard Fruit & S. S. Co.	New Orleans and Habana.	June 11.....	Orinoco	United Fruit Co.	Port Limon via Boecas.												
June 12.....	Uba.....	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	June 11.....	Orinoco	Pan American Airways	Panama via wayports.												
June 12.....	Armedita 19	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	June 11.....	No. 144-M 18	Pan American Airways	Barranquilla and wayp'ts.												
June 12.....	Orinoco.....	P. W. Hamilton	Port Limon, Costa Rica.	June 12.....	Darien C-35 18	Scandia Airplane Co.	Colon, Rep. of Panama.												
June 13.....	Iriona.....	Hamburg-American Line	Port Limon, Costa Rica.	June 12.....	Carmelita 19	Standard Fruit & S. S. Co.	New York via Kingston.												
June 13.....	Royal Netherlands S. S. Co.	United Fruit Co.	Port Limon, Costa Rica.	June 12.....	Bridge town.....	Colombian S. S. Line.	New York via wayports.												
June 13.....	Coscarina.....	Royal Netherlands S. S. Co.	Hamburg via wayports.	June 12.....	Uba.....	United Fruit Co.	New York via wayports.												
June 13.....	No. 144-M 18	Pan American Airways	Panama via wayports.	June 13.....	Armedita 19	J. Asmusen	Colon, Rep. of Panama.												
June 13.....	No. 699-M 18	Pan American Airways	Miami via wayports.	June 13.....	Cefalu.....	Standard Fruit & S. S. Co.	New Orleans and wayp'ts.												
June 13.....	No. 9688 18	Pan American Airways	San Salvador and wayp'ts.	June 13.....	Esfuerzo 19	J. Asmusen	Colon, Rep. of Panama.												
June 13.....				June 13.....	Iriona.....	United Fruit Co.	Bluefields, Nicaragua.												
June 13.....				June 13.....			New Orleans, La.												

PORT OF BALBOA.

* ARRIVALS.										* DEPARTURES.									
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—												
June 8.....	Nora 1	Arrow Oil Co.	Los Angeles, Calif.	June 9.....	Nora 1	Arrow Oil Co.	Los Angeles, Calif.												
June 10.....	Bokuyo Maru.....	Nippon Yusen Kaisha.....	Hongkong, China.	June 9.....	Bokuyo Maru.....	Nippon Yusen Kaisha.....	Valparaiso, Chile.												
June 10.....	Real 21.....	Hans Elliott.....	Panama Bay, R. P.	June 11.....	Real 21.....	Hans Elliott.....	Panama Bay, R. P.												

* Other than ships passing through the Canal.

18 Air mail carrier. 19 Motor schooner. 20 Motor boat.

1 Tanker. 21 Motor schooner.

Commercial Traffic Through the Panama Canal in May, 1931, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of May, 1931, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for May, 1930 and 1929. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States.....	66	341,482	257,633	417,647	257,591	\$298,363.03	178,238
Europe to Canada:							
Belgian.....	1	7,044	4,567	7,217	4,398	5,708.75	2,443
British.....	15	77,469	56,669	87,228	54,064	59,104.83	10,768
Danish.....	3	19,241	14,625	23,208	14,745	15,421.41	7,442
Dutch.....	1	8,351	6,201	10,155	6,337	7,751.25	3,801
French.....	1	7,592	4,635	8,379	5,031	5,793.75	1,512
German.....	3	20,829	13,854	23,411	14,176	17,317.50	8,139
Italian.....	2	11,803	8,773	14,606	9,175	10,966.25	2,254
Norwegian.....	3	16,196	10,712	17,465	10,814	13,379.84	7,661
Swedish.....	1	5,533	3,430	5,554	4,225	4,287.50	2,969
Total.....	30	174,058	123,466	197,223	122,965	139,731.08	46,989
United States to Far East:							
British.....	5	29,638	17,776	30,645	17,798	22,220.00	20,870
Danish.....	1	2,066	1,671	2,779	1,725	2,088.75	2,140
Japanese.....	6	34,031	28,448	43,650	27,953	35,357.55	40,358
Norwegian.....	2	8,487	4,982	8,635	4,944	6,227.50	13,518
Swedish.....	1	5,148	2,765	4,721	3,546	3,456.25	5,763
United States.....	4	27,166	20,142	33,071	20,103	25,177.50	22,709
Total.....	19	106,536	75,784	123,501	76,069	94,527.55	105,358
Europe to South America:							
Belgian.....	1	4,792	4,142	6,512	4,038	3,450.24	5,726
British.....	3	21,473	15,755	26,700	16,556	19,693.75	8,039
Chilean.....	1	78	32	361	122	40.00	.....
Dutch.....	3	15,023	8,712	14,536	8,598	10,890.00	5,726
French.....	1	5,563	4,282	6,863	4,287	5,352.50	2,646
German.....	4	16,518	10,715	17,451	10,458	13,393.75	8,198
Italian.....	1	9,329	5,176	11,718	6,750	6,470.00	1,713
Norwegian.....	1	3,965	2,637	4,436	2,644	3,296.25	4,214
Total.....	15	76,741	51,451	88,577	53,453	62,586.49	30,536
Cristobal to South America:							
Colombian.....	5	731	712	1,113	716	862.10	782
Dutch.....	2	1,484	588	1,560	646	735.00	271
German.....	5	4,189	2,978	5,370	2,950	3,597.50	787
Total.....	12	6,404	4,278	8,043	4,312	5,194.60	1,840
United States to South America:							
British.....	2	8,281	6,849	11,050	6,855	7,042.22	1,197
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	1,999
Swedish.....	2	8,917	7,486	30,676	8,762	6,420.24	.....
United States.....	8	33,454	24,523	44,274	24,474	28,380.25	12,876
Total.....	13	55,357	42,324	93,310	44,067	46,175.21	16,072
Europe to United States:							
British.....	4	19,600	13,198	21,359	13,074	14,046.21	.....
Danish.....	1	3,651	2,468	4,150	2,506	3,085.00	2,544
Norwegian.....	4	21,722	16,735	27,847	16,550	15,591.75	.....
Total.....	9	44,973	32,401	53,356	32,130	32,722.96	2,544
Europe to Australasia:							
British.....	8	61,764	44,036	72,453	44,485	53,412.24	32,730
Swedish.....	1	5,346	3,468	5,788	4,300	4,335.00	2,331
Total.....	9	67,110	47,504	78,241	48,785	57,747.24	35,061

¹ Includes Merchant Marine training vessel of 1,058 displacement tons.

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Foreign vessels without cargo, United States inter-coastal:							
British.....	2	9,602	7,508	12,353	7,523	\$6,481.44	.....
Danish.....	2	9,447	5,452	9,085	5,531	6,801.84	.....
German.....	1	4,340	3,762	6,370	3,658	3,124.80	.....
Norwegian.....	1	5,036	2,799	4,665	2,794	3,498.75	.....
Total.....	6	27,825	19,521	32,473	19,506	19,906.83	.....
United States to Canada:							
British.....	2	9,152	7,196	11,423	7,189	6,589.44	.....
Norwegian.....	1	4,284	2,507	4,333	2,494	3,084.48	.....
United States.....	2	10,687	7,314	11,883	7,299	9,142.50	11,972
Total.....	5	24,123	17,017	27,639	16,982	18,816.42	11,972
South America to United States:							
United States.....	4	17,624	12,374	19,744	12,298	15,467.50	8,177
United States to Philippine Islands:							
British.....	1	6,401	3,478	6,625	3,834	4,347.50	2,793
Norwegian.....	1	6,829	3,654	7,019	3,868	4,567.50	3,637
United States.....	1	6,525	4,832	7,621	4,832	6,040.00	8,431
Total.....	3	19,755	11,964	21,265	12,534	14,955.00	14,861
Cristobal to United States:							
United States.....	3	6,237	5,146	8,486	5,114	5,746.88	801
West Indies to Canada:							
British.....	2	5,008	4,034	6,582	4,032	7,792.50	6,003
Danish.....	1	4,558	2,734	4,553	2,785	3,417.50	3,750
Total.....	3	9,566	6,768	11,135	6,817	11,210.00	9,753
United States to Hawaii:							
United States.....	2	10,433	7,699	12,382	7,667	9,623.75	13,319
Canada to South America:							
British.....	2	17,602	15,241	28,377	15,913	12,673.44	.....
Central America to South America:							
British.....	1	4,546	3,916	6,233	3,948	4,895.00	8,392
Norwegian.....	1	1,676	928	1,733	968	1,160.00	2,200
Total.....	2	6,222	4,844	7,966	4,916	6,055.00	10,592
Cristobal to Central America:							
British.....	2	1,441	1,286	2,298	1,304	1,607.50	1,021
Cristobal to Balboa:							
Panamanian.....	2	44	48	90	58	36.00	.....
Around the world:							
United States.....	2	17,702	12,461	21,030	12,428	15,576.25	6,820
United States to Balboa:							
United States.....	1	4,844	3,966	6,391	3,945	4,957.50	3,748
United States to Australasia:							
United States.....	1	5,241	3,748	5,881	3,663	4,685.00	1,800
Canada to United States:							
British.....	1	4,235	3,452	5,767	3,423	3,049.20	.....
Canada to Australasia:							
British.....	1	5,518	4,419	7,178	4,413	5,523.75	2,543
South America to Canada:							
Norwegian.....	1	5,246	2,949	4,883	2,999	3,686.25	4,033
South America to Far East:							
Japanese.....	1	5,821	4,170	7,267	4,387	5,212.50	3,744
Europe to Central America:							
German.....	1	3,370	2,515	4,159	2,535	3,143.75	2,235
Africa to United States:							
Swedish.....	1	7,123	5,848	9,749	7,511	5,128.56	.....
Africa to South America:							
Belgian.....	1	3,326	2,872	4,800	2,949	2,394.72	.....
Africa to Far East:							
British.....	1	5,407	2,902	4,747	2,882	3,627.50	7,787
Grand total, May, 1931.....	219	1,081,366	786,051	1,313,605	793,616	910,131.46	519,844
Grand total, May, 1930.....	234	1,210,174	906,086	1,506,197	913,745	1,032,268.60	681,073
Grand total, May, 1929.....	278	1,329,095	1,041,384	1,668,713	1,014,479	1,164,303.77	920,360

* Includes naval vessel of 5,500 displacement tons.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States.....	64	351,498	267,776	432,921	268,643	\$334,648.50	483,108
Canada to Europe:							
Belgian.....	1	6,292	4,986	7,816	5,758	6,232.50	10,098
British.....	18	91,026	67,153	109,298	67,127	83,941.25	150,029
Dutch.....	1	7,619	5,782	9,338	5,808	7,227.50	10,241
French.....	1	7,475	4,380	7,817	4,667	5,475.00	7,423
German.....	3	21,346	14,245	24,047	14,686	17,806.25	26,063
Italian.....	1	9,856	7,927	12,951	8,025	14,995.00	9,523
Norwegian.....	3	17,401	11,676	19,170	11,928	14,595.00	23,242
Swedish.....	1	5,337	2,861	5,210	3,747	3,576.25	5,782
United States.....	1	5,450	3,465	5,687	3,450	4,331.25	7,754
Total.....	30	171,802	122,475	201,334	125,196	153,093.75	250,155
South America to United States:							
British.....	2	8,438	7,247	11,468	7,235	9,058.75	15,975
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	2,901
Danish.....	1	4,569	2,709	4,472	2,732	3,386.25	7,960
Swedish.....	2	8,917	7,486	30,676	8,762	9,357.50	43,796
United States.....	10	41,365	30,398	55,960	30,346	37,606.15	70,519
Total.....	16	67,961	51,273	109,886	53,051	63,699.90	141,151
Philippine Islands to United States:							
Japanese.....	6	29,711	25,953	37,731	25,462	31,929.90	44,979
Norwegian.....	2	8,291	4,895	8,282	4,849	6,118.75	13,713
Panamanian.....	1	6,955	3,659	6,856	3,659	4,573.75	6,741
United States.....	7	55,652	43,731	71,537	43,507	54,663.75	50,404
Total.....	16	100,609	78,238	124,406	77,477	97,286.15	115,837
South America to Europe:							
British.....	3	26,044	19,941	35,756	21,958	24,926.25	20,468
Dutch.....	2	9,678	5,421	9,230	5,627	6,776.25	13,083
French.....	1	4,936	3,385	5,751	3,555	4,231.25	8,440
German.....	7	35,365	24,900	41,224	24,917	31,125.00	53,282
Italian.....	1	7,516	5,514	12,003	6,058	6,892.50	1,448
Norwegian.....	1	5,001	2,753	5,494	4,744	3,441.25	6,924
Total.....	15	88,540	61,914	109,458	66,859	77,392.50	103,645
Australasia to Europe:							
British.....	11	91,247	64,044	106,034	65,911	80,055.00	67,258
French.....	1	3,681	3,096	5,112	3,079	3,870.00	5,330
Swedish.....	1	4,536	2,748	4,521	3,424	3,435.00	7,476
Total.....	13	99,464	69,888	115,667	72,414	87,360.00	80,064
South America to Cristobal:							
Colombian.....	4	570	550	880	550	678.20	621
Dutch.....	2	1,484	588	1,560	846	735.00	1,255
German.....	5	4,502	2,766	5,447	2,856	3,457.50	3,754
Total.....	11	6,556	3,904	7,887	4,252	4,870.70	5,630
United States to Europe:							
British.....	1	4,235	3,452	5,767	3,423	4,315.00	7,600
Danish.....	1	5,303	4,223	6,637	4,223	5,278.75	9,227
Norwegian.....	4	19,976	16,880	27,742	16,695	21,100.00	35,285
Total.....	6	29,514	24,555	40,146	24,341	30,693.75	52,112
Canada to United States:							
Danish.....	1	5,064	2,750	4,732	2,865	3,437.50	7,150
United States.....	4	19,181	13,984	22,339	13,898	17,480.00	24,421
Total.....	5	24,245	16,734	27,071	16,763	20,917.50	31,571
United States to Cristobal:							
United States.....	3	7,061	6,070	9,816	6,024	7,587.50	2,183
Hawaii to United States:							
United States.....	3	12,131	8,886	14,798	8,817	11,107.50	20,330
Central America to Cristobal:							
British.....	2	1,441	1,286	2,298	1,304	1,607.50	1,394
United States.....	1	1,549	1,167	1,974	1,161	1,458.75	881
Total.....	3	2,990	2,453	4,272	2,465	3,066.25	2,275
Balboa to Cristobal:							
Panamanian.....	3	75	76	131	84	78.72	66

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Around the world:							
British.....	1	16,521	10,086	20,175	12,162	\$12,607.50	.....
German.....	2	32,631	19,978	52,029	25,332	24,972.50	125
Total.....	3	49,152	30,064	72,204	37,494	37,580.00	125
United States to South America:							
United States.....	2	7,381	5,327	8,820	5,291	5,125.50	901
United States to West Indies:							
Norwegian.....	2	12,183	10,141	16,847	10,063	12,676.25	23,752
Canada to South America:							
United States.....	2	10,060	7,095	11,232	7,063	8,868.75	7,902
South America to Canada:							
British.....	2	17,602	15,241	28,377	15,913	19,051.25	37,551
Far East to United States:							
Japanese.....	2	11,562	8,788	14,260	8,653	10,985.00	6,754
Far East to Europe:							
Norwegian.....	1	4,681	2,496	4,400	2,527	3,120.00	7,300
Swedish.....	1	3,979	3,326	5,673	4,161	4,157.50	5,962
Total.....	2	8,660	5,822	10,073	6,688	7,277.50	13,262
Canadian intercoastal:							
British.....	1	4,186	3,322	5,465	3,400	4,152.50	6,054
Canada to West Indies:							
British.....	1	2,207	1,239	2,338	1,249	1,548.75	3,120
Central America to Europe:							
German.....	1	2,292	1,364	2,359	1,356	1,705.00	985
Hawaii to Europe:							
British.....	1	5,389	2,898	4,739	2,876	3,622.50	7,525
Australasia to Canada:							
British.....	1	5,494	4,403	7,178	4,413	5,503.75	1,800
Far East to West Indies:							
Norwegian.....	1	4,979	2,737	4,695	2,727	3,421.25	7,750
Grand total, May, 1931.....	209	1,103,593	812,683	1,386,380	833,572	1,013,320.72	1,405,608
Grand total, May, 1930.....	245	1,208,459	908,637	1,511,430	918,912	1,130,630.00	1,580,543
Grand total, May, 1929.....	246	1,167,810	897,630	1,481,885	906,931	1,132,242.80	1,616,479

United States Intercoastal Traffic by Commodities for May, 1931.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for May, 1931, and the totals for May, 1930 and 1929. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Agricultural implements.....	309	243	552
Alfalfa.....		1,208	1,208
Alfalfa meal.....		941	941
Ammonia.....	18		18
Asbestos.....	51		51
Asphalt.....	206	42	248
Automobiles.....	9,102	625	9,727
Automobile accessories.....	881	30	911
Bamboo.....		57	57
Bark:			
Cascara.....		5	5
Other and unclassified.....		22	22
Barley.....	18	250	268
Beans.....	5	3,052	3,057

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Blood and tankage.....	35		35
Bones and bonemeal.....		16	16
Borax.....	25	552	577
Bran.....		39	39
Bricks.....	281		281
Burlap.....	103	311	414
Calcium carbide.....	133		133
Camphor.....		50	50
Canned:			
Fish.....	80	8,304	8,384
Fruit.....	971	14,159	15,130
Meat.....	113	78	191
Milk.....	20	212	232
Soup.....	1,837		1,837
Vegetables.....	213	1,442	1,660
Miscellaneous and unclassified.....	1,579	9,291	10,870
Carbon black.....	255		255
Celite filtercel.....		2,474	2,474
Cement.....	275	193	468
Charcoal.....	341	50	391
Chemicals.....	2,375	625	3,000
China and fire clay.....	122	222	344
Coal.....	2,270		2,270
Cocoa.....	181	64	245
Coconuts.....	48	517	565
Coffee.....	486	87	573
Coke.....	534		534
Cold storage:			
Cheese.....		93	93
Eggs.....		846	846
Other.....	172		172
Confectionery.....	450	58	508
Cork.....	68	22	90
Cotton.....	222	949	1,171
Cyanide.....	5		5
Drugs and medicines.....	1,061	153	1,214
Earthenware.....	274	152	426
Eggs, dried.....		51	51
Explosives.....	151		151
Fish meal.....		32	32
Flour.....	356	4,593	4,949
Fruit:			
Dried.....	63	4,089	4,152
Fresh.....		2,849	2,849
Fullers' earth.....		47	47
Furniture.....	342	137	479
General.....	28,952	10,454	39,406
Glass and glassware.....	3,012	131	3,143
Glue.....	20	121	141
Guano.....		18	18
Gum.....		7	7
Hair.....	50	566	616
Hardwoods.....	213	125	338
Hay.....		463	463
Hemp.....		72	72
Honey.....	16	73	89
Hops.....		131	131
Infusorial earth.....		481	481
Jute.....	100		100
Kapok.....		111	111
Lard substitute.....	1,075		1,075
Leather.....	17		17
Linoleum.....	365	267	632
Liquors.....	54	50	104
Lumber.....	2,026	153,197	155,223
Malt.....	107		107
Manufactured goods:			
Iron and steel.....	69,435	736	70,171
Machinery.....	5,912	536	6,448
Railroad material.....	1,264		1,264
Tinplate.....	6,979	30	7,009
Textiles.....	6,096	396	6,492
Miscellaneous.....	9,408	1,423	10,831
Marble.....		23	23
Matches.....	222	50	272
Metals:			
Copper.....	42	6,557	6,599
Iron.....	1,250		1,250
Lead.....	47		47
Scrap.....	256	245	501
Tin.....		125	125
Zinc.....	36	306	342
Other.....	468		468
Milk, powdered.....		781	781
Molasses.....	150		150

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Musical instruments.....	6		6
Nitrates.....		30	30
Nuts.....	210	76	286
Oats.....	39		39
Oils:			
Cottonseed.....	434		434
Crude.....	900		900
Gas oil, fuel oil.....	15	12,487	12,502
Gasoline, benzine, naphtha.....	69	193,837	193,906
Linseed.....	39		39
Lubricating and greases.....	9,276	886	10,162
Olive.....	50		60
Vegetable.....	585	219	804
Wood.....	55		55
Other.....		275	275
Ores:			
Copper.....	300		300
Magnesite.....		181	181
Zinc.....		270	270
Other.....	180		180
Paint.....	556	3,534	4,090
Paper.....	5,123	7,270	12,393
Paper pulp.....	50	7,571	7,621
Paper roofing.....	38		38
Peanuts.....	991	581	1,572
Peas.....		25	25
Phosphates.....	1,102		1,102
Porcelain.....	90	68	158
Quicksilver.....		6	6
Rags.....		601	601
Rice.....	231	25	256
Rope.....	200	67	267
Rosin.....	965		965
Rubber:			
Manufactured.....	1,001	321	1,322
Scrap.....	15	455	470
Salt.....	289		289
Sand.....	30		30
Seeds:			
Grass.....		105	105
Hemp.....		55	55
Other.....	24	747	771
Shells.....	1,711		1,711
Silk.....		1,748	1,748
Skins and hides.....		2,735	2,735
Slate.....	223		223
Soap.....	2,399	156	2,555
Soda.....	544		544
Soda ash.....	743	40	783
Soda, bicarbonate.....	142		142
Soda, caustic.....	566		566
Starch.....	55		55
Sugar.....	40	11,966	12,006
Sulphur.....	5,220		5,220
Syrup.....	145		145
Talc.....		171	171
Tallow.....		682	682
Tar.....	115		115
Tea.....		25	25
Tobacco.....	903	35	938
Toys.....	55		55
Turpentine.....	51		51
Vegetables.....		46	46
Waste.....		58	58
Wax.....	104	148	252
Wheat.....		98	98
Wine.....		121	121
Wool.....		8,096	8,096
Zinc oxide.....	133		133
Total, May, 1931.....	199,626	492,524	692,150
Total, May, 1930.....	242,319	509,789	752,108
Total, May, 1929.....	294,255	546,192	840,447

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Comparison of Canal Traffic in May, 1931, with May Traffic in Previous Years.

Commercial traffic through the Canal during the month of May, 1931, with 428 transits, was the lowest May traffic since 1925, when 372 vessels, aggregating 1,847,682 net tons (Panama Canal measurement), and carrying 1,823,042 tons of cargo were passed through. In comparison with May, 1930, traffic for the past month declined 51 transits (10.6 per cent), 233,674 net tons (9.7 per cent), and 336,164 cargo tons (16.2 per cent), and in comparison with May, 1929, decreased 96 transits (18.3 per cent), 311,946 net tons (12.5 per cent), and 611,387 cargo tons (24.1 per cent).

In the tabulation below are shown the number of transits, net tonnage (Panama Canal measurement), and the tons of cargo carried through the Canal during the month of May each year from 1915 to 1931, inclusive, and for comparison the monthly averages for the corresponding fiscal year ending June 30 following:

Calendar year.	Month of May.			Fiscal year.	Average per month for fiscal year.		
	Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.		Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.
1915.....	138	475,004	584,020	1915.....	102	361,197	465,567
1916.....	123	385,062	479,961	1916.....	63	199,087	257,843
1917.....	145	468,665	596,425	1917.....	150	483,213	588,213
1918.....	198	658,174	757,984	1918.....	172	547,839	627,669
1919.....	176	566,892	642,171	1919.....	169	510,416	576,385
1920.....	224	852,425	974,919	1920.....	206	712,170	781,208
1921.....	210	864,617	792,735	1921.....	241	951,323	966,601
1922.....	243	1,032,816	1,158,507	1922.....	228	951,455	907,075
1923.....	419	2,128,414	2,265,083	1923.....	331	1,550,482	1,630,656
1924.....	417	2,085,670	2,353,986	1924.....	436	2,179,073	2,249,559
1925.....	372	1,847,682	1,823,042	1925.....	389	1,004,596	1,996,570
1926.....	470	2,243,103	2,416,701	1926.....	433	2,064,549	2,169,787
1927.....	471	2,248,892	2,379,713	1927.....	456	2,185,651	2,312,351
1928.....	508	2,274,612	2,497,588	1928.....	538	2,454,886	2,469,226
1929.....	524	2,496,905	2,536,839	1929.....	534	2,468,483	2,555,250
1930.....	479	2,418,633	2,261,616	1930.....	515	2,498,385	2,502,519
1931.....	428	2,184,959	1,925,452	1931.....	466	2,339,418	2,120,348

¹ Canal opened August 15, 1914.

² Average for 10½ months.

³ Average for 11 months of fiscal year.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending June 13, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
El Salvador.....	Panama Mail S. S. Co.....	June 1.....	June 2.....	17	18
Defiance.....	Roosevelt S. S. Co.....	June 1.....	June 1.....	218	
Chateau Thierry.....	U. S. Government.....	June 1.....	June 2.....	20	8
Amalthus.....	Anglo-Saxon Petroleum Co.....	June 2.....	June 4.....	7,739	
Saramacca.....	United Fruit Co.....	June 3.....	June 4.....	265	5
Recherche.....	Messageries Maritimes.....	June 4.....	June 5.....		81
Virginia.....	Panama-Pacific Line.....	June 5.....	June 5.....		169
City of Panama.....	Panama Mail S. S. Co.....	June 5.....	June 5.....	32	10
Cambrai.....	U. S. Government.....	June 5.....	June 5.....	6	20
Yega.....	U. S. Government.....	June 6.....	June 6.....	120	53
Santa Teresa.....	Grace Line.....	June 6.....	June 6.....	155	177
Europa.....	East Asiatic Co.....	June 8.....	June 8.....		68
Nora.....	Arrow Oil Co.....	June 8.....	June 9.....	13,659	
Santa Clara.....	Grace Line.....	June 8.....	June 8.....		2
Ecuador.....	Panama Mail S. S. Co.....	June 9.....	June 10.....	171	
Bokuyo Maru.....	Nippon Yusen Kaisha.....	June 10.....	June 10.....	26	
San Mateo.....	United Fruit Co.....	June 10.....	June 10.....	142	111
Santa Barbara.....	Grace Line.....	June 12.....	June 12.....	129	

Hours of Departure of Passenger Trains.

12.15 p. m., 4.30 p. m.; Sunday only, 9.20 a. m., 4.00 p. m.

Following are the hours of departure of the regular passenger trains of the Panama Railroad running between the Atlantic and the Pacific:

From Colon: Daily except Sunday, 7.00 a. m.,

From Panama: Daily except Sunday, 7.05 a. m., 12.20 p. m., 4.35 p. m.; Sunday only, 7.05 a. m., 6.15 p. m.

The time required for passage from one terminal to the other is 1 hour and 45 minutes.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., June 24, 1931. No. 47.

CANAL WORK IN MAY, 1931.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of May, 1931.

BALBOA HEIGHTS, C. Z., June 16, 1931.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of May, 1931:

TRANSITS AND TOLLS.

During the month, 428 commercial vessels and 10 small nonseagoing launches under 20 tons transited the Canal. In addition to these there were 19 vessels belonging to the United States Government on which no tolls were collected, making a total of 457 transits for the month, or a daily average on all traffic of 14.74.

Tolls on the 428 commercial vessels amounted to \$1,923,452.18, and on the launches to \$44.70, a total of \$1,923,496.88, or a daily average on all traffic of \$62,048.29.

Commercial traffic in the past month was the lowest since November, 1926, during which month the same number of vessels, 428, made the transit. The daily average of commercial transits for May, 1931 (13.81), was the lowest since October, 1925, in which month the daily average was 13.23 transits. The daily average tolls collection on commercial traffic in the past month, \$62,046.84, was the lowest since June, 1926, when the daily average was \$61,755.69. In comparison with May, 1930, commercial traffic for the past month was lower by 51 transits and \$239,446.42 in tolls, or 10.6 per cent and 11.1 per cent, respectively. In comparison with the previous month there was a decrease of 25 transits and \$90,896.95 in tolls, or 5.5 per cent and 4.5 per cent, respectively.

Commercial traffic for the first 11 months of the current fiscal year in comparison with the same period last year shows a decrease of 10.1 per cent in transits, 6.8 per cent in net tonnage (Panama Canal measurement), 16.4 per cent in cargo passing through, and 8.6 per cent in tolls assessed.

The total number of craft of all kinds transiting the Canal during the month of May in the two preceding years and in 1931 are shown in the following tabulation:

	May, 1929.	May, 1930.	May, 1931.
Commercial vessels.....	524	479	428
Launches (under 20 tons).....	18	14	10
Noncommercial vessels:			
United States Government.....	40	48	19
Panamanian Government.....	1	2	.....
Vessels for repairs.....	2	3	.....
Total.....	585	546	457

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun.....	5	8	13
Pedro Miguel.....	31	28	59
Miraflores.....	24	26	50
Total.....	60	62	122

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tons of cargo carried, and tolls collected, from the commercial traffic transiting the Canal each month from the beginning of the fiscal year 1931 to the end of May, 1931, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929-30	1930-1	1929-30.	1930-1.	1929-30.	1930-1.	1929-30.	1930-1.
July	527	488	2,468,280	2,438,895	2,598,162	2,402,047	\$2,259,582.37	\$2,180,511.82
August . . .	541	465	2,558,739	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
September .	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.56
October . . .	564	517	2,747,949	2,584,160	2,845,643	2,394,410	2,485,897.71	2,288,982.08
November . .	525	479	2,498,906	2,371,487	2,534,631	2,263,200	2,244,895.94	2,098,357.36
December . .	522	495	2,548,771	2,473,626	2,524,934	2,166,884	2,309,030.88	2,192,583.85
January . . .	531	476	2,601,628	2,380,871	2,611,632	2,106,937	2,360,211.24	2,108,140.42
February . . .	491	431	2,369,255	2,134,866	2,377,900	1,930,219	2,131,386.12	1,915,902.78
March	515	439	2,505,859	2,211,934	2,558,238	1,915,507	2,260,002.36	1,964,434.22
April	489	453	2,479,096	2,292,805	2,456,782	2,011,117	2,232,763.00	2,014,349.13
May	479	428	2,418,633	2,184,959	2,261,616	1,925,452	2,162,898.60	1,923,452.18
Total	5,707	5,129	27,622,377	25,733,600	27,883,051	23,323,824	24,975,895.48	22,824,047.84

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian governments, including merchant vessels chartered by these governments, and vessels transiting solely for repairs, do not pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for May in the years 1929, 1930, and 1931, and comparison with the monthly averages for the calendar year 1930:

	May, 1929.	May, 1930.	May, 1931.	Average per month for calendar year 1930.
Number of vessels	524	479	428	490
Panama Canal net tonnage	2,496,905	2,418,633	2,184,959	2,438,406
United States net tonnage	1,909,014	1,814,723	1,598,734	1,826,376
Registered gross tonnage	3,150,598	3,017,627	2,699,985	3,025,071
Registered net tonnage	1,921,410	1,832,657	1,627,188	1,839,006
Tolls	\$2,296,546.57	\$2,162,898.60	\$1,923,452.18	\$2,178,835.41
Tons of cargo carried	2,536,839	2,261,616	1,925,452	2,320,662

The average daily number of transits, net tonnage (Panama Canal measurement), tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for calendar year 1930.
	May, 1929.	May, 1930.	May, 1931.	
Number of transits	16.90	15.45	13.81	16.12
Panama Canal net tonnage	80,545	78,020	70,483	80,167
Tolls	\$74,082.15	\$69,770.92	\$62,046.84	\$71,632.95
Tons of cargo carried	81,833	72,955	62,111	72,296

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of May in 1929, 1930, and 1931, are shown in the following tabulation:

	Average per vessel.		
	May, 1929.	May, 1930.	May, 1931.
Panama Canal net tonnage	4,765	5,049	5,105
United States net tonnage	3,643	3,789	3,735
Registered gross tonnage	6,012	6,300	6,308
Registered net tonnage	3,667	3,826	3,802
Tolls	\$4,382.72	\$4,515.45	\$4,494.05
Tons of cargo (including vessels in ballast)	4,841	4,721	4,499
Tons of cargo (laden vessels only)	5,726	5,516	5,363

NATIONALITY OF VESSELS.

Fourteen nationalities were represented in the commercial traffic through the Canal in May, 1931. Vessels of the United States registry, with 191, led in the number of transits, while those flying the British flag, with 97, were second. Vessels of these

two nationalities made up 67.3 per cent of the total transits for the month. Vessels of German and Norwegian registry were next with 32 and 29 transits, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo through the Canal during the month of May was 1,925,452 tons, a decrease of 336,164 tons, or 14.9 per cent, in comparison with May, 1930. Cargo from the Atlantic to the Pacific aggregated 519,844 tons, as compared with 553,609 tons for the previous month, and 681,073 tons in May, 1930. From the Pacific to the Atlantic there were 1,405,608 tons, as compared with 1,457,508 tons for the previous month and 1,580,543 tons in May, 1930.

From the Atlantic to the Pacific various manufactured goods, totaling 165,006 tons, constituted the heaviest item of cargo, followed by phosphates with 44,274 tons, mineral oils with 32,445 tons, cement with 18,812 tons, cotton with 15,385 tons, paper with 15,307 tons, and tobacco with 14,303 tons. There was a decrease of 161,229 tons, or 23.7 per cent, in cargo moving in this direction as compared with May, 1930.

From the Pacific to the Atlantic mineral oils constituted the leading commodity, totaling in May, 1931, 314,546 tons. This was followed by lumber with 218,585 tons; wheat with 157,084 tons; sugar with 123,574 tons; ores with 98,325 tons; and nitrates with 71,040 tons. Wheat shipments via the Canal increased 44,045 tons, or 39 per cent, over May, 1930, and sugar shipments increased 8,658 tons, or 7.5 per cent. The other above-listed items decreased as follows in comparison with May, 1930: Mineral oils, 94,434 tons, or 23.1 per cent; lumber, 77,379 tons, or 26.1 per cent; ores, 76,015 tons, or 43.6 per cent; and nitrates, 32,289 tons, or 31.2 per cent. In aggregate there was a decrease of 174,935 tons, or 11.1 per cent, in cargo routed in this direction in comparison with May, 1930.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton, nor be less than \$0.75 per ton as determined in accordance with the United States rules of measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.904 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.7195 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of May, 1931, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flags:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$15,391.49	\$16,211.20	\$819.71	
British.....	1 484,891.24	1 517,933.00	33,041.76	
Chilean.....	8,663.75	9,423.80	760.05	
Colombian.....	1,540.30	1,301.00		\$239.30
Danish.....	42,917.00	44,659.00	1,742.00	
Dutch.....	34,115.00	43,639.00	9,524.00	
French.....	24,722.50	29,247.00	4,524.50	
German.....	119,643.55	143,646.00	24,002.45	
Italian.....	34,237.50	38,504.00	4,266.50	
Japanese.....	83,484.95	81,125.00		2,359.95
Norwegian.....	118,964.82	131,647.40	12,682.58	
Panamanian.....	4,688.47	7,044.00	2,355.53	
Swedish.....	44,153.80	48,420.00	4,266.20	
United States.....	1 906,037.81	1 955,773.60	49,735.79	
Total.....	1,923,452.18	2,068,574.00	147,721.07	2,599.25
Net increase on all traffic.....			145,121.82	

¹ Includes naval vessel paying \$2,750 on displacement tonnage.

² Includes Merchant Marine training vessel paying \$529 on displacement tonnage.

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$27,714.67
United States foreign trade.....	23,102.60
United States—Canal Zone trade.....	1,081.48
Total.....	49,735.79

¹ Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in May, 1931, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....	.35	1.60	.94
British.....	.61	1.16	.95
Chilean.....	.42	.62	.52
Colombian.....	1.07	1.09	1.08
Danish.....	1.00	1.63	1.31
Dutch.....	.39	1.31	.79
French.....	.32	1.32	.74
German.....	.43	.88	.74
Italian.....	.19	.63	.39
Japanese.....	1.11	1.25	1.18
Norwegian.....	.94	1.63	1.39
Panamanian.....		.97	.97
Swedish.....	.69	2.77	1.91
United States.....	.68	1.32	1.04
Averages, May, 1931.....	.66	1.28	1.02
Averages, May, 1930.....	.76	1.32	1.09
Averages, May, 1929.....	.93	1.44	1.20

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of May is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	3	14,415	\$15,106.25	29	169,506	\$173,888.75
Ballast.....	23	154,080	110,810.43	1	4,775	3,438.00
General cargo ships:						
Laden.....	153	772,743	680,047.15	174	879,983	798,284.40
Ballast.....	31	139,988	100,801.38			
Noncargo-carrying ships:						
Naval.....	2		3,279.00			
Passenger.....				3	49,152	37,580.00
Tugs.....	1	78	40.00			
Yachts.....	1	62	47.25	2	177	129.57
Total.....	219	1,081,366	910,131.46	209	1,103,593	1,013,320.72
Method of propulsion:						
Steam.....	145	706,060	611,723.64	151	814,322	756,461.55
Motor.....	74	375,306	298,407.82	58	289,271	256,859.17
Total.....	219	1,081,366	910,131.46	209	1,103,593	1,013,320.72

Of the 296 steam-driven vessels, 224 were oil burning and 72 coal burning.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of May, 1931. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Ammunition ships.....	2 1			2 1	4,405	\$5,506.25
Cruisers.....	2 1	8,900	\$4,450.00			
Gunboats.....	2 1	1,425	712.50			
Minesweepers.....				2 1	950	475.00
Submarines.....	2 4	4,725	2,362.50	2 3	2,745	1,372.50
Tankers.....	2 1	6,258	4,693.50	2 1	6,258	7,822.50
Transports.....	2 1	3,908	4,885.00			
U. S. Army vessels:						
Transports.....	2 2	9,217	11,521.25	2 1	3,908	4,885.00
Tugs.....	2 1	46	57.60	2 1	46	34.50
Total.....	11		28,682.25	8		20,095.75

* Indicates displacement tonnage.

2 Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of May, 1931, carried cargo as follows: Atlantic to Pacific, 2,324 tons; Pacific to Atlantic, 11,737 tons; total, 14,061 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of May, 1931. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	8	37	\$39.45
Pacific to Atlantic.....	2	7	5.25
Total.....	10	44	44.70

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of May, 1931, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	71,443	49,286	120,729
Local cargo shipped..... tons..	7,473	352	7,825
Transit cargo arriving..... tons..	1,932,828	1,933,996	3,866,824
Transit cargo clearing..... tons..	1,930,816	1,944,114	3,874,930
Cargo received for transshipment..... tons..	27,402	1,241	28,643
Cargo transhipped..... tons..	27,410	400	27,810
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	115	44	159
Number of releases issued.....	781	218	999
Tons received.....	1,538	283	1,821
Tons withdrawn.....	1,329	265	1,594
Packages received.....	9,756	1,994	11,750
Packages withdrawn.....	8,471	2,092	10,563
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	29	1	30
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons..	14,243	52	14,295
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	22	9	31
U. S. Army, including vessels..... tons..	82		82
Panama Railroad Company..... tons..	9		9
Individuals and companies, including galley coal for ships..... tons..	85		85
Transferred to Navy..... tons..	61		61
Total sales and issues..... tons..	14,502	61	14,563

	Cristobal.	Balboa.	Total.
Coal on hand, May 1, 1931.....	53,629		53,529
Coal on hand, June 1, 1931.....	49,637		49,637
Coal received during month.....	10,510		10,510
Coal received from Navy.....		61	61
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments.....	4,498.21	15,229.30	19,727.51
Panama Railroad Company.....	803.79	539.55	1,343.34
U. S. Army and Navy.....		134.75	134.75
Individuals and companies.....		119.76	119.76
Total sales and issues.....	5,302.00	16,023.36	21,325.36
Fuel oil received during May, 1931.....		66,715.15	66,715.15
Fuel oil on hand, June 1, 1931.....	50,960.81	77,996.14	128,956.95
Diesel oil issued and sold during May, 1931.....	184.73	1,977.46	2,162.19
Diesel oil on hand, June 1, 1931.....	1,083.35	20,135.18	21,218.53
Miscellaneous transfers.....	353.96	611.32	965.28
Gasoline and kerosene pumped for The Panama Canal.....	12,782.70	28,353.20	41,135.90
Gasoline pumped for individuals and companies.....	838.03	18,411.95	19,249.98
Oil pumped for individuals and companies:			
Receipts.....	179,357.67	216,487.40	395,845.07
Issues.....	196,398.80	150,336.02	346,734.82
Oil pumped for U. S. Navy.....	51,700.00	26,195.93	77,895.93
Total fuel oil, gasoline, and kerosene handled.....	446,917.89	525,111.79	972,029.68
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	14	1	15
Measured for Panama Canal net tonnage.....	2		2
Remeasured for Panama Canal net tonnage.....	10	3	13
Panama Canal net tonnage corrected.....	9	5	14
U. S. equivalent tonnage corrected.....	3	8	11
Services of harbor equipment:			
Tugs, total operating hours.....	292½	181½	473½
Launches, total operating hours.....	1,165	1,232½	2,397½
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$10,040.00	\$6,265.00	\$16,305.00
Pilotage.....	17,610.00	7,706.00	25,316.00
Seamen.....	9,924.00	9,710.00	19,634.00
Launch service.....	1,810.50	2,348.50	4,159.00
Wharfage.....	14,619.66	6,078.82	20,698.48
Ships measured.....	60.00		60.00
Miscellaneous.....	936.15	475.78	1,411.93
Ships repaired at Panama Canal shops:			
Commercial.....	42	6	48
U. S. Government.....	10	7	17
Panama Canal equipment.....	3	10	13
Total.....	55	23	78
Vessels dry-docked:			
Commercial.....	6	1	7
U. S. Government.....	3	1	4
Panama Canal equipment.....		8	8
Total.....	9	10	19
Clearances issued.....	262	231	493
Bills of health issued.....	270	232	502

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal.....	475	3,053,963	1,848,725	446	2,827,154	1,714,642
Vessels entering port but not transiting Canal.....	61	294,168	175,514	9	51,538	33,386
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	127	861,915	515,960	103	738,159	434,585
<i>Ships clearing.</i>						
All vessels, including those transiting Canal.....	483	3,082,266	1,870,346	447	2,829,245	1,710,980
Vessels clearing port but not transiting Canal.....	63	300,827	183,889	11	57,132	36,952
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	134	893,812	534,482	105	751,372	443,721

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports	895	668	1,563	80	81	161
From Pacific ports	240	350	590	245	202	447
Total disembarking	1,135	1,018	2,153	325	283	608
Embarking:						
For Atlantic ports	1,271	809	2,080	121	204	325
For Pacific ports	226	254	480	188	186	374
Total embarking	1,497	1,063	2,560	309	390	699
Remaining on board:						
From Atlantic to Pacific ports	1,006	1,651	2,657	1,632	2,256	3,888
From Pacific to Atlantic ports	1,642	3,043	4,685	2,423	2,273	4,696
From Atlantic to Atlantic ports	434	190	624			
From Pacific to Pacific ports				14	213	227
Total remaining on board	3,082	4,884	7,966	4,069	4,742	8,811
Total arriving	4,217	5,902	10,199	4,394	5,025	9,419
Total departing	4,579	5,947	10,526	4,378	5,132	9,510

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific	219	59	26.9
Pacific to Atlantic	209	59	28.2
Total	428	118	27.6

In addition to the aforesaid, 55 passenger-carrying vessels called at the port of Cristobal and 5 at Balboa without transiting the Canal, making a total of 178 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of May, 1931, 38 commercial airplanes entered and cleared at Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of May, 1931, together with the total sales in the corresponding months in 1930 and 1929:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels	\$1,401.45	\$7,762.85	\$17,517.68	\$164.58	\$6,565.68	\$33,412.24
Government vessels	164.00	1,966.89	6,232.91	35.12	1,330.64	9,729.56
P. R. R. vessels	3.60	250.38	209.57	561.16	47.99	1,072.70
Total sales, May, 1931	1,569.05	9,980.12	23,960.16	760.86	7,944.31	44,214.50
Total sales, May, 1930	2,254.57	13,204.68	36,038.35	821.43	7,392.27	59,711.30
Total sales, May, 1929	3,483.25	16,972.62	48,163.53	1,037.30	9,482.32	79,139.02
Sales at Balboa to:						
Commercial vessels	545.50	1,149.51	8,075.45	395.09	6,222.33	16,387.88
Government vessels	243.60	1,582.24	13,903.95	454.21	1,960.62	18,144.62
P. R. R. vessels				32.30		32.30
Total sales, May, 1931	789.10	2,731.75	21,979.40	881.60	8,182.95	34,564.80
Total sales, May, 1930	1,021.78	5,856.22	43,842.09	1,393.65	13,528.21	65,641.95
Total sales, May, 1929	1,374.55	13,343.59	39,350.48	825.07	5,208.25	60,101.94

The aggregate sales to Government vessels during the month was \$27,874.18; to Panama Railroad vessels, \$1,105; and to other commercial vessels, \$49,800.12, making the total sales to all vessels, \$78,779.30. These figures are subject to minor change on final audit.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of May, 1931, as compared with the corresponding month in 1930 and 1929:

Locks.	Number of lockages.						Comparative grand total.		
	Commercial.			Noncommercial. †			May, 1929.	May, 1930.	May, 1931.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	206	204	410	5	10	15	512	492	425
Pedro Miguel.....	204	210	414	12	18	30	508	510	444
Miraflores.....	205	209	414	12	15	27	504	499	441
	Number of vessels put through locks.								
Gatun.....	210	219	429	22	27	49	605	581	478
Pedro Miguel.....	209	219	428	44	45	89	642	596	517
Miraflores.....	209	219	428	37	46	83	628	596	511

† Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	21	25	27
Panama Canal equipment.....	13	59	50
Launches (under 20 tons).....	15	5	6

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in May, 1931, as compared with the preceding month and the corresponding month in 1930:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	1,604,740,000	1,230,410,000	1,285,050,000
Maintenance.....	34,880,000		
Leakage.....	30,000,000	25,000,000	20,000,000
Total, May, 1931.....	1,669,620,000	1,255,410,000	1,305,050,000
Total, April, 1931.....	1,464,810,000	1,059,240,000	1,053,980,000
Total, May, 1930.....	1,922,370,000	1,477,540,000	1,494,830,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of May, 1931, are shown in comparative form in the following tabulation:

	May,		May—Years of record.		
	1930.	1931.	Maximum.	Minimum.	Mean.
Discharge of Chagres River at Alhajuela.....	<i>C. f. s.</i> 2,069	<i>C. f. s.</i> 1,911	<i>C. f. s.</i> 5,220	<i>C. f. s.</i> 491	<i>C. f. s.</i> 2,082
Maximum momentary discharge for the month.....	15,986	18,200	61,200		
Gatun Lake watershed, total yield.....	4,596	4,835	8,665	1,417	4,570
Gatun Lake watershed, net yield.....	4,037	4,238	7,964	583	3,919
Draft on Gatun Lake for lockages and power.....	2,910	2,801	2,910	1,067	2,132

‡ May 5, 1918.

‡ 1914 excluded.

The monthly mean discharge of the Chagres River at Alhajuela for May, 1931, was 1,911 c. f. s., which is 8 per cent below the 30-year average of 2,082 c. f. s. The maximum monthly mean discharge on record for May is 5,220 c. f. s. in 1910, and the minimum, 491 c. f. s. in 1920. The maximum momentary discharge for the month was 18,200 c. f. s. at elevation 100.90 feet on the 27th, and the minimum momentary discharge was 552 c. f. s. at elevation 91.74 feet on the 5th and 9th. The maximum momentary discharge on record for May is 61,200 c. f. s. at elevation 110.00 feet on May 5, 1918, and the minimum, 231 c. f. s. at elevation 90.17 feet on May 11, 1920.

Gatun Lake varied in elevation during May from a minimum of 82.08 feet on the 13th to a maximum of 83.43 feet on the 30th. The total yield of the Gatun Lake watershed was 4,835 c. f. s., or 6 per cent above the 18-year average of 4,570 c. f. s. The maximum total yield on record for May is 8,665 c. f. s. in 1918, and the minimum, 1,417 c. f. s. in 1920.

Miraflores Lake varied in elevation from a maximum of 54.22 feet on the 13th to a minimum of 53.00 feet on the 27th. The mean elevation was 53.61 feet, and at midnight on the 31st the lake was at elevation 53.77 feet.

SEISMOLOGY.

Slight seismic disturbances were recorded on May 1st and 15th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,674,400 kilowatt hours, and the computed water consumption was 4,318,625,448 cubic feet. Continuous service was maintained at this station throughout the month. The Miraflores Diesel-electric station had a gross generator output of 7,900 kilowatt hours, and the fuel oil consumption was 32.74 barrels. This station was operated only for peak load service during the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 33 vessels during the month. There were 393 work orders issued during the month, as compared with 400 issued during the previous month.

MECHANICAL DIVISION.

During the month of May, 1931, miscellaneous repairs were made on 55 vessels at Cristobal and 23 at Balboa. Nine vessels were dry-docked at Cristobal and 10 at Balboa. Annual overhaul and alterations were begun on the Navy minesweeper *Chewink* during the month. The U. S. S. *Rochester* returned to Balboa for continuation of her overhaul.

MUNICIPAL ENGINEERING DIVISION.

On the Thatcher Highway under construction from the west bank of the Canal opposite Balboa to the Zone boundary line near Arraijan, 2,800 cubic yards of grading were performed and 1,334 cubic yards of rock were crushed. All work on this project, with the exception of the rock crushing, has been suspended. On the Farfan Beach road, 3,500 feet of clearing were completed, 1,600 cubic yards of earth were excavated and placed for grading, and 4 culverts were constructed.

Work on several improvement projects in the cities of Panama and Colon was carried on.

The usual work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 763,115,500 gallons.

DREDGING DIVISION.

The general movement along the waterfront of west Culebra slide continued throughout the month with an average of 0.4 foot toward the Canal between stations 1771-00 and 1794-00 W. and 0.5 foot southward between stations 1772-00 and 1776-00 W. The reference points on this slide showed no perceptible movement. On the 16th of the month the 95-foot berm between stations 1828-00 and 1830-W. broke off and went into the prism, shoaling out 50 feet beyond the west prism line. A dredge worked 13 days between stations 1825-00 and 1835-00 W., removing 26,950 cubic yards of material. An additional dredge worked one-half day on the same slide, between stations 1830-00 and 1830-25 W., removing 1,000 cubic yards of material.

A dredge worked three days in front of Cucaracha village slide, between stations 1838-00 and 1840-E., excavating 4,000 cubic yards of material. Five observation points were placed on Cartagena slide and observed frequently during the month. Small bank breaks occurred in a number of places throughout the Cut due to recent heavy rains.

The total excavation during May, 1931, was 814,320 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
	Cubic yds.	Cubic yds.	Cubic yds.
Work excavation:			
Canal prism, Gatun Lake—			
Project No. 4.....	600	2,800	3,400
Canal prism, Gaillard Cut—			
Project No. 3.....	250	2,350	2,600
Project No. 5.....	14,450	100,000	114,450
Maintenance.....	6,850	10,700	17,550
Cucaracha signal station slide.....	2,900	25,050	27,950
Cucaracha village slide.....	800	3,200	4,000
Canal prism, Pacific entrance—			
Project No. 1-B.....	204,300		204,300
Maintenance.....	151,800		151,800
Balboa inner harbor—			
Maintenance.....	286,200		286,200
Plant excavation:			
Chame sand service.....	2,070		2,070
Total.....	670,220	144,100	814,320

The ferry operating at the north end of Pedro Miguel locks functioned 31 days during the month. One thousand three hundred sixty-eight (1,368) single trips were made, and 147 Panama Canal, 200 U. S. Army, and 5,702 other vehicles, a total of 6,049, were ferried across the Canal.

MADDEN DAM PROJECT.

On the Summit-Madden Dam transmission line the final grading and backfill was concluded with towers Nos. 12 to 25, inclusive, and Nos. 36 to 81, inclusive. The curing of the concrete footings was concluded with tower 81 on May 27. The steel for the transmission towers arrived during the month and erection commenced. At the end of the month 6 towers were completed and 2 were 50 per cent completed.

Work was started on May 4 on the construction of 5 cottages, 1 bachelor building, and a mess hall, which will be a part of the Government camp.

Considerable data were forwarded to the Designing Engineer who is in Denver in consultation with the United States Bureau of Reclamation.

Filling of parts of sinkholes Nos. 20 and 5 was authorized, equipment prepared, and some preliminary work done.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on May 31, 1931, was 24,137, composed of 8,130 Americans, 2,853 of whom were men, 2,496 women, and 2,781 children; 167 Europeans, 75 of whom were men, 31 women, and 61 children; and 15,840 West Indians, 4,368 of whom were men, 2,840 women, and 8,632 children. The total number of persons in quarters on May 31, 1931, was 22,768.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of May 20, 1931, with a comparison of the working force for the preceding month and for May, 1930:

	Total employees.		As of May 20, 1931.		
	May, 1930.	April, 1931.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	136	120	55	51	106
Electrical.....	388	381	169	206	375
Municipal Engineering.....	1,034	996	91	782	873
Lock Operation.....	947	1,066	237	698	935
Dredging.....	1,272	1,197	201	971	1,172
Madden Project.....	920	371	25	233	258
Mechanical.....	1,405	1,337	470	910	1,380
Marine.....	897	828	196	551	747
Fortifications.....	158	159	19	86	105
Total.....	7,157	6,455	1,463	4,488	5,951
Supply Department:					
Quartermaster.....	2,275	1,750	201	1,545	1,746
Commissary.....	1,546	1,541	241	1,307	1,548
Cattle Industry—Plantations.....	96	179	2	95	97
Hotel Tivoli.....	115	124	8	104	112
Hotel Washington.....	111	108	8	91	99
Transportation.....	331	309	73	233	306
Total.....	4,474	4,011	533	3,375	3,908
Accounting Department.....	211	209	205	6	211
Health Department.....	1,179	1,112	288	821	1,109
Executive Department.....	863	885	551	332	883
Total.....	2,253	2,206	1,044	1,159	2,203
Panama Railroad Company:					
Superintendent.....	332	291	44	240	284
Transportation.....	184	184	61	118	179
Receiving and Forwarding Agency.....	1,348	1,488	79	1,292	1,371
Coaling Stations.....	318	245	42	199	241
Total.....	2,182	2,208	226	1,849	2,075
Grand total, May, 1930.....	16,066				
Grand total, April, 1931.....		14,880			
Grand total, May, 1931.....			3,266	10,871	14,137

Additions to the gold force on the Isthmus in May were as follows: Employed in the United States, 2; employed on the Isthmus, 10; reemployed on the Isthmus, 8; total, 20. Separations from the gold force totaled 36, as follows: Resigned, 10; discharged, 22; retired, 2; died, 2. At the end of the month there were on file 850 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 162 deaths occurred during the month of May, 1931, among the population of the Canal Zone and the cities of Panama and Colon (population, 143,636), which is equivalent to an annual death rate of 13.61 per 1,000 population. The leading causes of death were: Tuberculosis (various organs), 23; pneumonia (broncho and lobar), 17; organic diseases of the heart, 15; diarrhea and enteritis, 13; cancer (various organs), 12; and nephritis (acute and chronic), 12. There were 7 deaths from arterio-sclerosis, 6 from apoplexy, and 1 from meningococcus meningitis. There were 27 deaths among nonresidents, which are not included in the above statistics.

There were 299 live births and 17 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 26.40. Deaths among children under 1 year of age numbered 26, giving an infant mortality rate based on the number of live births reported, of 86.96.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon was 226, of whom 15 were employees (2 white and 13 colored), 24 were members of employees' families (6 white and 18 colored), 13 were Canal Zone agriculturists, 63 were other civilian nonemployees, and 111 were Army and Navy personnel. Of the 39 employees and members of employees' families, 20 were probably infected outside our sanitized areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick.

There was 1 death from malaria among residents, a colored child living in Frijoles.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$525,428.85, of which \$513,850.81 was for the Department of Operation and Maintenance, and \$11,578.04 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material, amounted to \$30,410.14.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of April, 1931, as compared with April, 1930, with the figures for the first 10 months of the current fiscal year as compared with the same period in the fiscal year 1930.

It is impossible to submit figures for the month of May at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	April, 1930.	April, 1931.	To end of May.	
			Last year.	This year.
Tolls.....	\$2,232,790.15	\$2,014,413.63	\$22,812,999.29	\$20,899,617.03
Other receipts.....	318,153.39	363,699.77	3,699,554.17	3,520,659.49
Total transit revenues.....	2,550,943.54	2,378,113.40	26,512,553.46	24,420,276.52
Total transit expenses.....	1,064,953.34	1,150,008.19	11,089,903.02	11,702,165.37
Net transit revenues.....	1,485,990.20	1,228,105.21	15,422,650.44	12,718,111.15
Three per cent capital charge.....	621,848.49	626,085.74	6,213,079.91	6,260,568.95
Transit surplus.....	864,141.71	602,019.47	9,209,570.53	6,457,542.20
Business revenues.....	1,545,760.58	1,274,018.07	16,598,939.79	14,904,393.01
Business expenses.....	1,469,352.57	1,190,634.02	15,665,908.65	14,204,016.53
Net business revenues.....	76,408.01	83,384.05	933,031.14	700,376.48
Three per cent capital charge.....	63,586.90	65,882.05	66,954.43	691,632.38
Business surplus.....	12,821.11	17,502.00	266,076.71	8,744.10
Combined revenues.....	4,096,704.12	3,652,131.47	39,709,182.08	39,323,669.53
Combined expenses.....	2,534,305.91	2,340,642.21	23,353,500.50	25,906,181.90
Net revenues.....	1,562,398.21	1,311,489.26	16,355,681.58	13,418,487.63
Three per cent capital charge.....	685,435.39	691,967.79	6,880,034.34	6,952,201.33
Combined surplus.....	876,962.82	619,521.47	9,475,647.24	6,466,286.30

Respectfully,

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, June 20, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Tons.	Net.	Nature.	Gross.	Net.
Steel Voyager.	14	6.20	14	6.30	14	13.24	14	14.40	American.	Isthmian S. S. Lines.	395.5	55.0	23.0	Baltimore, Md.	Pt. Allen, T. H.	General.	5,489	5,249	
Barak.	12	17.30	14	8.30	14	15.02	14	16.10	Dutch.	Royal Neth. S. S. Co.	202.0	33.1	10.8	Cristobal, C. Z.	Guayaquil, Ecuador	General.	54	742	
Robin Gray.	14	13.35	14	12.40	14	19.12	14	20.22	American.	Isthmian S. S. Lines.	424.0	55.0	21.1	Baltimore, Md.	Vancouver, B. C.	Steel, general.	5,014	7,472	
Laganbank.	14	13.30	14	13.45	14	14.14	14	23.20	British.	Bank Line, Ltd.	426.9	57.0	21.1	Baltimore, Md.	Shanghai, China.	General.	2,931	7,507	
Wahine.	14	9.30	14	15.00	14	21.45	14	22.45	German.	Hamburg-American Line.	438.0	55.6	18.0	Hamburg, Germany	Valparaiso, Chile.	General.	1,808	7,004	
Hilfridijk.	14	10.30	15	6.00	15	13.05	15	14.15	Dutch.	Holland-American Line.	490.0	65.0	21.3	Rotterdam, Holland.	Vancouver, B. C.	General.	2,670	11,724	
Mirabooka.	14	20.45	15	6.20	15	13.49	15	15.00	Swedish.	Transatlantic S. S. Co.	457.0	57.0	16.6	Göteborg, Sweden.	Los Angeles, Calif.	Ballast.	8,274	6,098	
Forbes.																			
Hauptman.	15	6.15	15	7.15	15	14.51	15	16.15	American.	Munson, McCork'k Line.	409.8	54.2	21.6	San Juan, P. R.	Tacoma, Wash.	General.	4,122	6,931	
Guayaquil.	13	19.05	15	8.50	15	15.43	15	16.55	American.	Panama R. R. S. S. Line.	351.0	43.6	18.0	New York, N. Y.	Guayaquil, Ecuador	General.	675	2,574	
Peter Kerr.	14	16.30	15	8.55	15	17.27	15	17.40	American.	Quaker Line.	415.0	55.6	18.2	Philadelphia, Pa.	Seattle, Wash.	General.	2,192	7,704	
Castana.	15	9.40	15	10.00	15	17.23	15	18.38	American.	U. S. Tankship Corp.	390.0	54.2	21.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast.	6,206	4,286	
Alamar.	15	12.05	15	12.20	15	19.42	15	20.43	American.	Calmar Line.	399.7	56.2	21.0	Baltimore, Md.	Seattle, Wash.	Steel, general.	5,469	7,351	
Duchessa.																			
D'Aosta.	15	12.50	15	15.30	15	22.25	15	24.00	Italian.	Nav. Libera Tristina.	464.0	57.0	15.3	Genoa, Italy.	Vancouver, B. C.	General.	436	8,734	
Chino Corwin.	16	8.05	16	8.10	16	16.25	16	19.20	British.	Jason Jones & Co.	400.0	53.5	25.7	Bridgetown, Barbos	Vancouver, B. C.	Sugar.	7,150	6,246	
China Arrow.	16	8.50	16	9.10	16	16.07	16	17.10	American.	Standard Oil Co.	468.3	62.7	20.0	Providence, R. I.	Los Angeles, Calif.	Ballast.	10,084	7,388	
Nosa King.	15	20.15	16	11.00	16	18.52	16	20.30	American.	N. O. & S. A. S. S. Co.	324.0	46.2	17.3	New Orleans, La.	Talcahuano, Chile.	General.	1,732	3,978	
Alaskan.	16	12.15	16	12.25	16	18.50	16	20.25	American.	Amer.-Hawaiian Line.	415.0	53.7	18.8	Boston, Mass.	Seattle, Wash.	General.	1,885	7,380	
Los Angeles.	16	5.00	16	13.08	16	20.23	16	21.40	German.	Hamburg-American Line.	432.3	59.0	18.4	Hamburg, Germany	Portland, Ore.	General.	2,775	8,454	
West Nilus.	16	13.05	17	8.18	17	15.12	17	16.20	American.	McCormick S. S. Co.	410.0	54.0	18.6	Buenos Aires, Arg.	Vancouver, B. C.	General, bones.	3,097	6,581	
Leuna.	17	6.15	17	10.05	17	16.52	17	18.15	German.	Hamburg-American Line.	462.0	62.0	18.0	Hamburg, Germany	Vancouver, B. C.	Ballast.	3,500	9,294	
Lillian.																			
Luckenbach.	17	12.00	17	12.30	17	19.05	17	20.30	American.	Luckenbach Line.	449.0	60.2	21.0	Boston, Mass.	Seattle, Wash.	General.	3,500	9,294	
Pacific.																			
Reliance.	17	21.48	18	6.05	18	13.38	18	14.45	British.	Furness, Withy & Co.	435.9	60.1	17.8	Glasgow, Scotland.	Vancouver, B. C.	General.	893	9,644	
Amerika.	18	8.40	18	9.05	18	16.30	18	16.25	Danish.	East Asiatic Co.	465.0	62.0	19.0	Copenhagen, Den.	Vancouver, B. C.	Ballast.	11,060	8,076	
Fernwood.	18	16.15	18	19.25	19	9.16	19	10.09	Norwegian.	Fern Line.	390.0	55.0	21.4	Houston, Tex.	Yokohama, Japan.	Cotton, general.	3,613	6,840	
Caldas.	12	22.00	18	19.25	19	9.19	19	12.10	Colombian.	National Navigation Co.	116.0	21.0	9.5	Cristobal, C. Z.	Buenaventura, Col.	General.	130	211	
Rangitika.	18	14.45	19	6.00	19	13.39	19	19.20	British.	N. Z. Shipping Co.	531.0	70.0	26.7	London, England.	Wellington, N. Z.	General.	2,920	18,206	
President.																			
Grant.	18	16.30	19	6.08	19	14.09	19	22.18	American.	Dollar Line.	518.0	72.0	26.11	New York, N. Y.	Manila, P. I.	General.	2,457	15,232	
Pennsylvania.	19	5.45	19	7.15	19	15.10	20	20.28	American.	Panama-Pacific Line.	586.4	80.3	30.0	New York, N. Y.	San Francisco, Cal.	General.	2,887	25,262	
Patricia.	18	15.20	19	7.10	19	15.19	20	9.55	German.	Hamburg-American Line.	374.0	53.0	15.9	Hamburg, Germany	Champerico, Guat.	General.	1,064	5,370	
Pat Doherty.	18	20.25	19	8.20	19	16.22	19	17.45	American.	Richfield Oil Co.	430.0	59.2	2.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	7,773	5,634	
Chester.	19	5.40	19	10.10	19	16.47	19	18.40	Danish.	Isbrandtsen Moller Co.	378.0	50.2	20.0	Baltimore, Md.	Manila, P. I.	General.	3,465	5,526	
Macresk.	17	14.10	19	11.45	19	18.30	20	00.39	American.	U. S. Navy.	455.0	55.0	20.6	Cristobal, C. Z.	Los Angeles, Calif.	Ballast.	4,066		
Neches.	17	14.10	19	11.45	19	18.30	20	00.39	American.	U. S. Navy.	455.0	55.0	20.6	Cristobal, C. Z.	Los Angeles, Calif.	Ballast.	4,066		

² Motor ship.

⁴ Tanker.

St. Michel	19	2 25	19	15 05	19	21 35	American	U. S. Army	436.0	58.0	24.3	Brooklyn, N. Y.	Balboa, C. Z.	General	361.
Santa Rita	19	15 25	6 00	20 13	41	21	American	Grace Line	227.5	53.2	11.0	New York, N. Y.	Valparaiso, Chile	General	1,364
Durazo	17	13 50	6 55	20 13	20	15 15	German	Hamburg-American Line	270.5	34.0	21.0	Cristobal, C. Z.	Guayaquil, Ecuador	General	300
Picoayo	17	20 30	6 15	20 14	56	20	British	Chilean Government	285.8	48.2	11.0	Greenock, England	Talcahuano, Chile	Ballast	2,348
Monroffe	20	1 35	20	7 25	20	14 47	British	Imperial Oil Co	510.0	68.0	24.0	Montreal, Canada	Talara, Peru	Ballast	11,555
Shikisan Maru	20	5 40	7 20	20 16	59	20	Japanese	Mitsui & Co.	400.0	53.0	15.0	Amsterdam, Holland	Los Angeles, Calif.	Ballast	6,598
Pacific	20	10 30	20	10 45	20	17 44	American	Dillon S. S. Line	410.0	54.2	22.0	Philadelphia, Pa.	Tacoma, Wash.	General	2,728
Hemlock	20	11 50	20	12 05	20	19 33	British	Canadian Transp. Co.	300.0	44.0	15.0	Pt. of Spain, B.W.I.	Vancouver, B. C.	(s)	4,423
Lycia	20	14 20	20	16 30	20	21 58	American	Amer-Hawaiian Line	434.3	57.7	19.0	Boston, Mass.	Portland, Oreg.	General	3,122
Georgian	20	14 30	20	16 30	20	22 58	American	Amer-Hawaiian Line	434.3	57.7	19.0	Boston, Mass.	Portland, Oreg.	General	3,122

3 Transport. 4 Dredge. 5 Sugar, salt, and charcoal. THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Yearby	13	19 30	14	6 28	14	14 40	14	16 00	British	485.0	55.5	25.0	Victoria, B. C.	Dunkirk, France	Wheat	9,400
Gerrude	14	6 48	14	8 22	14	15 40	14	15 40	American	391.9	51.2	26.0	Manila, P. I.	New Orleans, La.	Coconut oil	6,700
Kiddog	14	14 00	15	14 14	14	22 10	14	23 35	American	400.0	56.0	27.0	Everett, Wash.	Baltimore, Md.	Lumber	9,000
Ponona	15	13 00	6 12	16 14	15	16 14	15	16 14	British	390.3	51.4	23.1	Valparaiso, Chile	New York, N. Y.	General	3,150
Santa Elisa	15	3 45	15	6 20	15	14 35	15	14 35	American	410.0	54.7	26.5	Portland, Oreg.	Philadelphia, Pa.	Lumber	7,326
San Marcos	15	3 45	15	6 20	15	14 35	15	14 35	American	390.6	50.7	22.0	Valparaiso, Chile	Hamburg, Germany	General	4,672
Eruf	15	6 00	15	7 24	15	16 00	16	4 15	German	300.0	50.7	22.0	Corral, Chile	Hull, England	General	4,672
Saracento	15	3 13	15	8 28	15	16 10	15	16 10	British	224.0	40.0	20.0	Balboa, C. Z.	Cristobal, C. Z.	Cruiser	7,330
Sacramento	15	11 13	15	11 13	15	18 10	15	22 10	American	359.3	50.8	14.0	Champetico, Guat.	New Orleans, La.	Ballast	4,814
Esnateh	15	12 00	15	12 24	15	18 45	15	18 45	German	400.0	52.0	19.0	Brisbane, Australia	Montreal, Canada	General	3,203
Canadian	15	16 10	15	16 55	16	10 55	16	15 10	British	450.7	57.2	25.5	Corral, Chile	Hamburg, Germany	General	8,056
Conqueror	15	18 15	15	19 18	16	11 30	16	11 50	German	407.4	52.2	26.0	La Libertad, Ecua.	Philadelphia, Pa.	Crude oil	7,957
Planet	15	18 00	16	6 12	16	14 15	16	14 15	British	300.0	55.0	24.0	Victoria, B. C.	Havre, France	Wheat	7,920
El Cervo	16	8 45	16	9 37	16	17 40	16	19 30	British	419.5	56.0	27.0	San Francisco, Cal.	New York, N. Y.	Gasoline, lub. oil	9,536
Ruddy	16	12 30	16	13 16	16	21 08	16	21 05	American	445.0	58.0	27.0	Portland, Oreg.	Boston, Mass.	Lumber, general	8,976
Solana	16	15 10	16	13 16	16	21 08	16	21 05	American	409.8	53.9	22.2	Valparaiso, Chile	Hamburg, Germany	General	6,110
Robert	16	12 30	16	15 56	16	23 05	17	1 00	American	495.0	60.1	28.0	Vancouver, B. C.	Glasgow, Scotland	General	8,265
Luckenbaeh	16	15 20	16	17 15	17	11 45	17	14 55	German	420.0	50.2	25.0	Los Angeles, Calif.	Cristobal, C. Z.	General	7,000
Carl Legten	16	16 25	16	17 15	17	11 45	17	14 55	German	420.0	50.2	25.0	Vancouver, B. C.	Antwerp, Belgium	Grain	8,720
Pacific	16	17 00	16	18 40	17	10 55	17	10 55	British	400.0	57.8	21.0	Vancouver, B. C.	Palmouth, Eng.	Wheat	7,856
Enterprise	16	18 15	17	6 17	17	14 10	17	14 15	American	460.0	57.8	21.0	San Francisco, Cal.	Boston, Mass.	General	8,478
Neches	16	19 30	17	6 42	17	14 15	17	14 15	British	400.0	58.0	24.0	Portland, Oreg.	New York, N. Y.	Lumber	6,994
Kurdistan	17	1 00	17	7 25	17	15 45	17	15 45	American	477.1	60.0	29.0	Los Angeles, Calif.	Guantanamo Bay	Fuel oil	10,927
Hindpool	17	8 15	17	8 55	17	15 45	17	15 45	American	400.7	54.2	24.0	Tacoma, Wash.	Baltimore, Md.	General, lumber	6,842
Nevedan	17	9 30	17	10 06	17	17 30	17	17 30	American	400.4	54.2	25.0	N. Westminster, B. C.	Liverpool, England	General	7,785
Dorothy Cahill	17	9 30	17	10 06	17	17 30	17	17 30	American	400.4	54.2	25.0	N. Westminster, B. C.	Liverpool, England	General	7,785
Salinas	16	15 33	17	10 27	17	18 10	17	18 10	American	516.5	72.2	29.4	Manila, P. I.	New York, N. Y.	General	4,038
Munmysie	17	11 10	17	12 03	17	19 40	17	19 40	American	385.6	52.2	26.0	Talcahuano, Chile	Liverpool, England	General	6,109
Tacoma City	17	11 10	17	12 03	17	19 40	17	19 40	American	299.4	50.0	22.0	Valparaiso, Chile	Pensacola, Fla.	General	3,307
President	17	20 00	17	20 41	18	12 30	18	14 50	American	299.4	50.0	22.0	Valparaiso, Chile	Pensacola, Fla.	General	3,307
Madison	18	2 00	18	6 44	18	14 20	18	23 45	British	411.5	54.1	23.0	Antofagasta, Chile	New York, N. Y.	Copper ore	7,500
Lagarto	18	4 35	18	7 35	18	14 20	18	22 25	American	217.0	33.0	13.0	Guayaquil, Ecuador	Cristobal, C. Z.	General	826
Nosa Chief	18	8 40	18	9 47	18	17 30	18	21 45	German	285.6	42.2	19.0	Anacortes, Wash.	Tampico, Mexico	Shoes, lumber	2,424
Chilcoop	18	8 40	18	9 47	18	17 30	18	21 45	German	285.6	42.2	19.0	Anacortes, Wash.	Tampico, Mexico	Shoes, lumber	2,424
Chili	18	9 45	18	10 25	18	17 30	18	21 45	German	285.6	42.2	19.0	Anacortes, Wash.	Tampico, Mexico	Shoes, lumber	2,424
Jelling	18	10 18	18	12 16	18	19 55	22	10 35	Danish	285.6	42.2	19.0	Anacortes, Wash.	Tampico, Mexico	Shoes, lumber	2,424

6 Motor ship. 7 For orders. 8 Fuel oil and gasoline. 9 Beans, nitrates, and coffee.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Timavo	18	13 10	18	13 46	18	21 25	19	13 25	Italian	Nav. Libera Triestina.	464 1	57 4	26 0	Vancouver, B. C.	Genoa, Italy	General	8,011	8,423	5,806
Fordeljord	18	6 30	18	15 05	18	23 15	19	12 00	Norwegian	Canadian Transp. Co.	378 8	30 2	27 0	Vancouver, B. C.	London, England	Wheat, general	6,917	5,572	4,134
Cauca	18	15 10	18	15 39	18	23 05	19	12 00	Colombian	National Navigation Co.	107 0	22 9	9 0	Buenaventura, Col.	Cristobal, C. Z.	General	174	262	151
Sanyo Maru	18	18 40	18	19 15	19	11 25	19	15 47	Japanese	Osaka Shosen Kaisha.	446 0	60 5	26 0	Shanghai, China.	New York, N. Y.	General	5,942	8,942	6,251
Heinrich V.	18	15 00	19	6 05	19	14 00	19	14 00	Danzig	W. Tanksohiff Rhederei	521 1	70 2	30 0	Talara, Peru	Valloe, Norway	(+)	15,749	12,535	8,224
Riedemann	18	16 10	19	6 30	19	15 30	19	14 00	Japanese	Nippon Yusen Kaisha.	445 0	58 0	27 0	Itoilo, P. I.	Baltimore, Md.	(+)	8,721	7,955	5,681
Suyama Maru	18	20 00	19	7 09	19	15 35	19	15 35	American	Williams S. S. Corp.	410 0	52 2	28 0	Seattle, Wash.	Baltimore, Md.	Lumber, general	7,461	6,821	4,927
San Felipe	19	4 00	19	8 05	19	16 15	19	16 15	British	Pacific Steam Nav. Co.	215 7	33 6	17 0	Champerico, Guat.	Cristobal, C. Z.	(+)	968	1,273	706
Aevella	19	3 30	19	8 20	19	16 55	19	16 55	British	Canadian American Co.	400 0	50 0	26 0	Vancouver, B. C.	London, England	Lumber, general	7,500	5,665	3,986
Inevilla	19	3 10	19	10 12	19	17 50	19	17 50	British	N. Z. Shipping Co.	489 5	67 0	25 0	Gisborne, N. Z.	London, England	Frozen, general	4,151	12,792	8,980
Orari	19	15 50	19	18 30	20	11 25	20	17 45	American	Panama R. R. S. S. Line	251 0	43 0	17 0	New York, N. Y.	New York, N. Y.	General	1,199	2,873	1,776
Buenaventura	19	15 50	19	18 30	20	11 25	20	17 45	American	Panama R. R. S. S. Line	251 0	43 0	17 0	New York, N. Y.	New York, N. Y.	General	1,199	2,873	1,776
Laurits	19	18 40	19	19 10	20	11 15	21	00 30	Norwegian	Fred Olsen & Co.	435 9	56 2	26 0	Vancouver, B. C.	Oslo, Norway	General	8,000	7,963	5,887
Swanson	19	23 30	20	6 36	20	15 30	20	15 30	American	Richfield Oil Co.	500 0	71 2	30 0	Los Angeles, Calif	New York, N. Y.	Gasoline	15,147	11,667	8,542
Tamiahua	19	23 30	20	6 55	20	14 05	20	14 05	American	U. S. Navy	500 0	71 2	30 0	Balboa, C. Z.	Cristobal, C. Z.	General	15,147	11,667	8,542
S-48	20	8 00	20	9 40	20	18 30	21	9 25	German	North German Lloyd	469 0	58 0	24 1	Valparaiso, Chile	Bremen, Germany	General	6,415	7,743	5,250
Goslar	20	8 00	20	9 40	20	18 30	21	9 25	German	North German Lloyd	469 0	58 0	24 1	Valparaiso, Chile	Bremen, Germany	General	6,415	7,743	5,250
F. J.	20	12 45	20	13 25	20	11 30	20	21 00	American	Luckenbach Line	448 0	50 0	24 0	Seattle, Wash.	New Orleans, La.	General	4,853	8,508	6,179
Luckenbach	20	13 00	20	16 05	21	11 35	21	11 35	British	Imperial Oil Co., Ltd	521 5	70 4	31 0	Talara, Peru	Halifax, N. S.	Crude, fuel oil.	16,500	12,339	7,717
Calgrolite	20	13 00	20	16 05	21	11 35	21	11 35	British	Imperial Oil Co., Ltd	521 5	70 4	31 0	Talara, Peru	Halifax, N. S.	Crude, fuel oil.	16,500	12,339	7,717

1 Tanker. 10 Motor ship. 11 Submarine. 12 Gold, platinum, and general. 13 Crude oil and naphtha. 14 Sugar, molasses, etc. 15 Coffee, hides and general. All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Date.	ARRIVALS.		DEPARTURES.	
	Vessel.	Line.	Vessel.	Line.
June 15	Darien C-35	Scandia Airplane Co.	Barranquilla and waypts.	Pan American-Grace Airways
June 16	C. C. Acme	R. Foster	Cartagena, Colombia	Pan American Airways
June 16	Zacapa	United Fruit Co.	Santa Marta, Colombia	Pan American Airways
June 16	Magallanes	Spanish Line	Barcelona via wayports.	Pan American Airways
June 16	Davision	Leeward S. S. Line.	Liverpool via wayports.	Hamburg via wayports.
June 16	Inapaquina	A. Tagaropoulos	Colon, Rep. of Panama.	Royal Netherlands S. S. Co.
June 16	Anshechua	A. Tagaropoulos	New York via Haiti.	Pan American Airways
June 17	Ancon	United Fruit Co.	New York via Kingston.	Pan American Airways
June 17	Pastores	United Fruit Co.	New York via Kingston.	A. Tagaropoulos

16 Air mail carrier. 17 Schooner. 18 Motor boat. * Other than ships passing through the Canal.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
June 17	Tela	United Fruit Co.	New Orleans, La.	June 17	Inapaquina ²²	A. Tagaropoulos	Colon, Rep. of Panama.
June 17	No. 667-M ¹⁹	Pan American Airways	Miami via wayports.	June 17	Zacapa	United Fruit Co.	New York via Kingston.
June 18	Bolivar	Colombian S. S. Line.	New York via wayports.	June 17	Davision	Leyland S. S. Line.	Pastellillo, Cuba.
June 19	Atlantida	Standard Fruit & S. S. Co.	New Orleans via Habana.	June 18	Pastores	United Fruit Co.	Colombian ports.
June 19	Calamares	United Fruit Co.	New York via Habana.	June 18	Tela	United Fruit Co.	Port Limon, Costa Rica.
June 19	Cestaria	Elders & Fyffes	Avonmouth via wayports.	June 19	Bolivar	Colombian S. S. Line.	New York via Kingston.
June 19	Caenden	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	June 19	Cavina	Elders & Fyffes	Avonmouth via wayports.
June 19	Antecillo ²⁰	United Fruit Co.	Curacao, D. W. I.	June 19	Pearl Marie ²¹	G. I. Bryan	Bluefields, Nicaragua.
June 19	Pearl Marie ²¹	U. S. Navy	Cartagena, Colombia.	June 19	Calamares	United Fruit Co.	New York via wayports.
June 19	Carmelita ²¹	G. I. Bryan	Colon, Rep. of Panama.	June 19	Darien C-35 ¹⁹	Scadta Airplane Co.	Barranquilla and waypts.
June 20	Anneta I. ²²	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	June 20	Magallanes	Spanish S. S. Line.	Barcelona via wayports.
June 20	Tela	United Fruit Co.	Port Limon, Costa Rica.	June 20	Atlantida	Standard Fruit & S. S. Co.	New Orleans and wayports.
June 20	No. 9664 ¹⁹	Pan American Airways	San Salvador and waypts.	June 20	Carmelita ²¹	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.
June 20	No. 668-M ¹⁹	Pan American Airways	Miami via wayports.	June 20	Anneta I. ²²	P. W. Hamilton	Colon, Rep. of Panama.
June 20	No. 144-M ¹⁹	Pan American-Grace Airways	Pinental via wayports.	June 20	Caenden	United Fruit Co.	Curacao via Bocas.
June 20				June 20	Tela	United Fruit Co.	New Orleans, La.

¹⁹ Air mail carrier. ²⁰ Gunboat. ²¹ Motor schooner. ²² Motor boat.

PORT OF BALBOA.

June 17	Suriname	United Fruit Co.	San Francisco, Calif.	June 18	Suriname	United Fruit Co.	San Francisco, Calif.
June 19	Dos Hermanos ²³	A. Valdez	Panama Bay, R. P.	June 19	Des Hermanos ²³	A. Valdez	Panama Bay, R. P.
June 19	A. B. Obarrío ²³	A. Valdez	Panama Bay, R. P.	June 19	A. B. Obarrío ²³	A. Valdez	Panama Bay, R. P.
June 19	Nueva Panama ²⁴	Hans Elliott	Panama Bay, R. P.	June 19	Nueva Panama ²²	Hans Elliott	Panama Bay, R. P.
June 19	Sambu ²³	Hans Elliott	Panama Bay, R. P.	June 19	Sambu ²³	Hans Elliott	Panama Bay, R. P.
June 19	Real ²³	Hans Elliott	Panama Bay, R. P.	June 19	Real ²³	Hans Elliott	Panama Bay, R. P.
June 20	La Brea ¹	Union Oil Co. of Calif.	Los Angeles, Calif.	June 21	La Brea ¹	Union Oil Co. of Calif.	Los Angeles, Calif.

²³ Motor schooner. ²⁴ Motor ship.

¹ Tanker. ² Other than ships passing through the Canal.

"Belgenland" Cruise Canceled.

Advice has been received by The Panama Canal from the local agent of the American Express Co. that the cruise of the Red Star liner *Belgenland*, scheduled to pass through the Canal on December 23, 1931, has been canceled. This would have been the eighth annual cruise of this ship around the world, passing through the Canal on each voyage.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending June 13, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cristobal.....	Panama R. R. S. S. Line.....		June 7.....		716
City of Panama.....	Panama Mail S. S. Co.....		June 7.....		15
San Rafael.....	Quaker S. S. Line.....	June 7.....	June 8.....	66	(²)
Santa Clara.....	Grace Line.....	June 8.....	June 8.....	540	82
Pearl Marie.....	R. Feuillebois.....	June 8.....	June 8.....	(¹)	33
Europa.....	Danish East Asiatic Co.....	June 8.....	June 8.....	½	(²)
Wiegand.....	North German Lloyd.....	June 8.....	June 9.....	220	29
Zenon.....	French Line.....	June 8.....	June 9.....	662	143
Cuba.....	French Line.....	June 8.....	June 10.....	93	1,130
Orinoco.....	Hamburg-American Line.....	June 9.....	June 9.....	69	13
Wisconsin.....	French Line.....	June 9.....	June 9.....	29	89
Orestes.....	Royal Netherlands S. S. Co.....	June 9.....	June 10.....	130	22
Sixaola.....	United Fruit Co.....	June 9.....	June 10.....	44	519
Esfuerzo.....	J. Asmusen.....	June 9.....	June 13.....	70	30
Salvador.....	Pacific Steam Navigation Co.....		June 10.....		918
Cauca.....	National Navigation Co.....		June 10.....		69
Aconcagua.....	Chilean S. S. Line.....	June 10.....	June 10.....	35	(²)
Australien.....	Danish East Asiatic Co.....	June 10.....	June 11.....	21	(²)
Lautaro.....	Pacific Steam Navigation Co.....	June 10.....	June 11.....	32	25
Orbita.....	Pacific Steam Navigation Co.....	June 10.....	June 11.....	27	(²)
Euador.....	Panama Mail S. S. Co.....	June 10.....	June 11.....	1,177	13½
Iriona.....	United Fruit Co.....	June 10.....	June 11.....	1,681	(²)
San Mateo.....	United Fruit Co.....	June 10.....	June 12.....	1,065	(²)
Zacapa.....	United Fruit Co.....	June 10.....	June 11.....	521	456
Santa Barbara.....	Grace Line.....	June 11.....	June 11.....	398	124
Manizales.....	Roland Line.....		June 11.....		365
Durazo.....	Hamburg-American Line.....	June 11.....	June 11.....	436	
Oakland.....	Hamburg American Line.....	June 11.....	June 11.....	94	383
Knute Nelson.....	Fred Olsen & Co.....	June 11.....	June 11.....	(¹)	131
Bridgetown.....	Colombian S. S. Line.....	June 11.....	June 12.....	84	19
Kinderdijk.....	Holland-America Line.....	June 11.....	June 12.....	(¹)	104
Ulua.....	United Fruit Co.....	June 12.....	June 12.....	258	270
Caldas.....	National Navigation Co.....	June 12.....	June 12.....	239	
Cefalu.....	Standard Fruit & S. S. Co.....	June 12.....	June 13.....	186	255
Wyoming.....	French Line.....	June 12.....	June 13.....	127	380
Baralt.....	Royal Netherlands S. S. Co.....	June 12.....	June 13.....	420	
City of Panama.....	Panama Mail S. S. Co.....	June 12.....	June 13.....	197	514
Costa Rica.....	Royal Netherlands S. S. Co.....	June 13.....	June 13.....	55	
Rialto.....	Navigazione Libera Triestina.....	June 13.....	June 13.....	37	
Orinoco.....	Hamburg-American Line.....	June 13.....	June 13.....	14	
Iriona.....	United Fruit Co.....	June 13.....	June 13.....	12	691
Guayaquil.....	Panama R. R. S. S. Line.....	June 13.....	June 13.....	912	

¹ No cargo discharged

² No cargo laded.

³ Three cases.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending June 20, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
President Polk.....	Dollar Line.....	June 12.....	June 12.....		10
Suriname.....	United Fruit Co.....	June 17.....	June 19.....	284	25
Tsuyama Maru.....	Nippon Yusen Kaisha.....	June 18.....	June 19.....	170	
Fordefjord.....	Canadian Transport Co.....	June 18.....	June 18.....	223	
Patricia.....	Hamburg-American Line.....	June 19.....	June 20.....	294	
Pennsylvania.....	Panama-Pacific Line.....	June 19.....	June 20.....		179
President Grant.....	Dollar Line.....	June 19.....	June 19.....	1	7
Santa Rita.....	Grace Line.....	June 20.....	June 20.....	49	10
La Brea.....	Union Oil Co.....	June 20.....	June 21.....	11,083	23

THE PANAMA CANAL RECORD

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Volume XXIV. Balboa Heights, C. Z., July 1, 1931. No. 48.

Canal Traffic During Fiscal Year 1931.

The total number of commercial vessels transiting the Canal during the fiscal year ended June 30, 1931, aggregated 5,529, and the total tolls collection was \$24,645,456.57. Commercial traffic for the fiscal year 1931, was the lowest year's traffic since the fiscal year 1927, when 5,475 vessels, paying \$24,228,830.11 in tolls, were passed through. In comparison with the fiscal year 1930, the past year's traffic shows a decrease of 656 in transits and \$2,431,433.44 in tolls (10.6 per cent and 9.0 per cent, respectively), and in comparison with 1929, a decrease of 884 in transits and \$2,481,920.34 in tolls (13.8 per cent and 9.1 per cent, respectively). The tolls figures are the amounts collected and are subject to minor adjustments on account of overcharges or supplemental bills.

The daily average number of commercial transits during the year was 15.15, as compared with 16.95 for the fiscal year 1930, and 17.57 for the fiscal year 1929. The daily average tolls collection amounted to \$67,521.80, as compared with \$74,183.26 for 1930 and \$74,321.58 for 1929.

In the following tabulation, the number of commercial transits and the amount of tolls collected are shown for the fiscal year 1931, with the averages of transits and tolls, together with the totals for the years 1930 and 1929:

	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July.....	488	\$2,180,511.82	15.74	\$70,339.09
August.....	465	2,080,230.42	15.00	67,104.21
September.....	458	2,057,103.58	15.26	68,570.12
October.....	517	2,288,982.08	16.68	73,838.13
November.....	479	2,098,357.36	15.96	69,945.25
December.....	495	2,192,583.85	15.97	70,728.51
Total, first 6 months.....	2,902	12,897,769.11	15.77	70,096.57
January.....	476	2,108,140.42	15.35	68,004.53
February.....	431	1,915,902.78	15.39	68,425.10
March.....	439	1,964,434.22	14.16	63,368.85
April.....	453	2,014,349.13	15.10	67,144.97
May.....	428	1,923,452.18	13.81	62,046.84
June.....	400	1,821,408.73	13.33	60,713.62
Total, last 6 months.....	2,627	11,747,687.46	14.51	64,904.35
Total, fiscal year, 1931.....	5,529	24,645,456.57	15.15	67,521.80
Total, fiscal year, 1930.....	6,185	27,076,890.01	16.95	74,183.26
Total, fiscal year, 1929.....	6,413	27,127,376.91	17.57	74,321.58

Canal Traffic in June, 1931.

During the month of June, 1931, 400 commercial vessels and 5 small launches transited the Canal. Tolls on the commercial vessels aggregated \$1,821,408.73, and on the launches \$27.73, or a total tolls collection of \$1,821,436.46.

The daily average number of commercial transits for the month was 13.33, and the average tolls collection \$60,713.62, as compared with an average of 13.81 transits and \$62,046.84 in tolls for the previous month, and an average of 15.93 transits and \$70,033.15 in tolls for June, 1930. The average amount of tolls paid by each of the commercial transits was \$4,553.52, as compared with \$4,395.39 for the month of June, 1930. Commercial traffic for the past month was the lowest since October, 1925, when 388 vessels were transited.

New Motor Ship "Europa" Lands Passengers to Obtain Ballast Rate.

The new combination passenger and freight motor ship *Europa*, of the East Asiatic Company, Danish operators, arrived at Cristobal on the morning of June 8, 1931, on her maiden voyage in the trade between Europe and the west coast of North America. She transited the Canal the same day and cleared Balboa the following day for Vancouver, via Puerto Armuelles, Los Angeles, and San Francisco. At the time of arrival the vessel had 14 passengers in transit and 2 tons of cargo for Cristobal. The passengers, with their baggage, were debarked at Cristobal and crossed the Isthmus by train, reboarding the vessel at Balboa. This procedure gave the vessel the benefit of the ballast rate as she had neither passengers nor cargo while making actual transit. The saving to the vessel in making the transit in ballast was \$1,265.75. Tolls for transit laden would have been \$7,223.75 and those paid for ballast transit were \$5,958.

The *Europa* is 465 feet long by 62 feet beam, and has a deadweight capacity of 10,850 tons. She is a sister ship of the *Amerika* which made her initial voyage through the Canal on this run in May, 1930.

With the addition of the new vessel, the East Asiatic Company has a fleet of 10 vessels in the Europe-west coast North America trade, as follows: *Europa*, *Amerika*, *Asia*, *Australien*, *Tongking*, *Chile*, *Annam*, *Panama*, *Denmark*, and *Siam*.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT.
BALBOA HEIGHTS, C. Z., June 25, 1931.

No. 904.

Colombia, north coast, Cartagena approach, Tesoro Island Light again normal. The following is quoted from the daily memorandum of the U. S. Hydrographic Office, dated Washington, D. C., June 16, 1931:

The second officer of the American S. S. *Guatemala* reports that Tesoro Island Light was observed to be functioning normally on the morning of April 25 and again on the morning of May 18, 1931.

Approximate position: Lat. 10° 14' 10" N., long. 75° 44' 50" W.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., June 26, 1931.

No. 907.

Colombia, Buenaventura River, Buenaventura, wreck marking light established. The following is quoted from the daily memorandum of the U. S. Hydrographic Office, dated Washington, D. C., June 13, 1931:

The master of the motor ship *Konigsberg* reports that a flashing white light, period 3 seconds, flash 0.4 second, eclipse 2.6 seconds, has been placed on the mast of the S. S. *Tritonia*, which was sunk in (approximately) latitude 3° 52' 30" N., longitude 77° 06' 00" W.

H. BURGESS,
Governor.

Chilean Line to Withdraw Vessels from New York-Valparaiso Service.

The Compania Sud-Americana de Vapores (Chilean Line), operator of a passenger and cargo service between New York and Valparaiso, via the Panama Canal, is to discontinue this service with the southbound voyage of the *Aconcgua* which is due to pass through the Canal on her homeward voyage on July 3. The withdrawal of these vessels was deemed necessary on account of depressed business conditions, but the service is to be resumed when conditions improve.

The Chilean Line's service between Valparaiso and New York was inaugurated in 1920 with the *Renaico*, which the company had purchased from the Toyo Kisen Kaisha, in whose service she was known as the *Nippon Maru*. In 1922 the new *Aconcgua*, a passenger and cargo vessel built especially for this service, was added to the run, and early in 1923 her sister ship *Teno* was inducted into the service. These two vessels have been operating continuously since that time over this route, offering one sailing monthly in each direction.

The Chilean Line has been identified locally since 1890, in which year it began operating a service between Valparaiso and the Isthmus. At the time of the extension of its service to New York in 1922, it was one of the principal transshipping lines passing through the Canal to Cristobal.

Two other vessels were withdrawn some time ago from the New York-South American service because of depressed conditions—the *Ebro* and *Essequibo* of the Pacific Steam Navigation Co.

Panama Mail Line Revises Schedule.

The Panama Mail Steamship Line, operator of five passenger and cargo vessels in the coast to coast service, via Colombian, Central American, and Mexican ports, has announced a revision of its schedule of sailings in order to synchronize Canal Zone tourist connections with the north and southbound sailings of the vessels of the Grace fleet, and to speed up the New York, California, and South American passenger traffic.

Under the new layout, passengers sailing from New York to Central America, Mexico, and California, may sail two days later than the sailing date of the Panama Mail vessels, on vessels of the line's parent company, the Grace Line, and connect with the Panama Mail liners at the Canal. Passengers from California, Mexico, and Central America may transship at the Panama Canal to the South American vessels of the Grace fleet, call at Habana, and arrive in New York four days earlier than was possible under the old arrangement.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., June 22, 1931.

No. 903.

Colombia, west coast, Buenaventura River entrance, Palmas Island Light, latest information.

1. The first officer of the American S. S. *Buenaventura* reports that on June 17, 1931: Palmas Island Light was showing one flash every 9 seconds; flash 0.5 second, eclipse 8.5 seconds.
2. He reports further that the following statement was made by the Captain of the Port of Buenaventura:

The change in the characteristic of Palmas Island Light was caused by the breakage of part of the revolving mechanism of the light which has since been sent to the United States to be repaired and as soon as it is returned the original characteristic of the light will be restored.

Approximate position: 3° 53' 28" N., 77° 22' 12" W.

3. This notice supersedes all former notices regarding this light.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, June 27, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Colombia	20	1.20	21	6.05	21	12.31	22	15.35	American.	Panama Mail S. S. Co.	380.0	48.7	22.3	New York, N. Y.	San Francisco, Cal.	Coffee, general.	2,637	6,015	4,281
Alabama	20	4.25	21	6.00	21	13.11	21	14.30	French.	French Line	424.0	34.0	19.0	Havre, France.	Corral, Chile.	General	1,863	7,428	5,167
Port Fremantle	20	23.10	21	7.30	21	13.38	21	18.40	British.	Com'th & Dom. Line.	477.0	63.0	20.3	London, England.	Buff, N. Z.	General	2,492	10,652	7,704
Baron Ramsay	21	2.00	21	7.30	21	14.43	21	16.10	British.	H. Hogarth & Sons	360.0	50.2	12.9	Charleston, S. C.	Arica, Chile.	Ballast.	4,297	3,051	3,051
Hegira	21	11.30	21	11.50	21	18.47	21	20.00	American.	Hegira S. S. Co.	440.0	56.0	21.0	Baltimore, Md.	Seattle, Wash.	Steel, general.	5,052	8,353	6,113
Willpöle.	21	14.30	21	14.45	21	21.30	21	23.00	American.	Williams S. S. Line.	386.8	52.2	20.0	Baltimore, Md.	Seattle, Wash.	Coal, general.	3,973	5,680	4,080
J. W.	21	17.20	21	19.45	22	9.31	22	10.40	American.	James B. Berry & Sons.	364.0	51.0	21.0	Providence, R. I.	Los Angeles, Calif.	Ballast.	5,174	3,523	3,523
Bromny	22	6.15	22	6.45	22	13.20	22	15.35	Norwegian.	Amer. Ref'g & Sm'g Co.	380.5	54.7	20.0	Botwood, N. F.	San Francisco, Cal.	Lead concentrate	4,765	6,447	4,757
Greystone	22	6.45	22	7.20	22	14.24	22	15.35	British.	Barber S. S. Line.	428.0	56.0	22.8	New York, N. Y.	Shanghai, China.	General	3,049	7,596	5,179
Castle	22	6.30	22	7.45	22	15.05	22	16.20	British.	Inter. Freighting Co.	399.6	53.0	19.0	New York, N. Y.	Corral, Chile.	General	1,200	5,852	4,112
Hendonsball	22	6.40	22	8.30	22	16.28	22	18.25	Dutch.	Royal Neth. S. S. Co.	473.5	65.6	18.6	Amsterdam, Holland	Pisagua, Chile.	Ballast.	11,638	7,744	7,744
Amsterdam	22	5.40	22	10.10	22	16.56	22	18.05	British.	Donaldson Brothers.	425.0	56.0	18.8	Glasgow, Scotland	Vancouver, B. C.	(*)	532	7,827	5,442
Gregalia	22	10.10	22	10.10	22	20.08	24	2.43	American.	E. Hope Norton	77.7	22.2	9.0	Colon, R. P.	Balboa, C. Z.	Towing launches	98	55	55
White Shadow	22	6.00	22	10.10	22	17.43	22	18.48	American.	Clyde-Mallory Lines.	394.0	62.2	20.8	New York, N. Y.	Wilmington, Calif.	Ballast.	6,601	4,648	4,648
Itroquois	22	17.00	22	13.05	22	20.20	22	21.25	British.	T. & J. Harrison	419.8	54.6	10.10	Liverpool, England	Williams Hd., B. C.	General	1,504	7,819	6,101
Designer	22	1.55	22	14.08	22	21.20	23	17.35	Dutch.	Royal Neth. S. S. Co.	400.0	58.3	18.10	Hamburg, Germany	Corral, Chile	General	1,504	7,819	6,101
Baarn	22	1.55	22	10.10	22	20.08	22	20.08	American.	E. Hope Norton	400.0	58.3	18.10	Colon, Rep. de P.	Balboa, C. Z.	Ballast.	2	2	2
Orca	22	1.55	22	10.10	22	20.08	22	20.08	American.	E. Hope Norton	400.0	58.3	18.10	Colon, Rep. de P.	Balboa, C. Z.	Ballast.	2	2	2
Mantia	22	10.10	22	10.10	22	20.08	22	20.08	American.	E. Hope Norton	400.0	58.3	18.10	Colon, Rep. de P.	Balboa, C. Z.	Ballast.	2	2	2
George	22	17.30	23	6.00	23	14.05	24	16.40	Norwegian.	Fred Olsen & Co.	425.5	55.3	21.0	Antwerp, Belgium.	Vancouver, B. C.	(*)	5,363	7,553	5,673
Washington	22	5.00	23	6.20	23	14.48	23	15.55	American.	Andrew Line	380.0	53.2	17.6	New York, N. Y.	Seattle, Wash.	General	1,991	5,654	4,123
Sutherland	23	5.20	23	7.20	23	15.05	23	16.25	British.	Wilson Weir & Co.	420.0	53.9	14.0	Philadelphia, Pa.	Mauru, Australia	Ballast.	7,098	5,017	5,017
Oakbank	23	5.20	23	7.15	23	15.28	23	16.15	Yugoslav.	Chilean Nit'ne Producers	425.0	58.2	16.0	Rotterdam, Holland	Chile.	Ballast.	7,731	5,759	5,759
Triglav	23	6.30	23	7.15	23	15.48	23	17.00	American.	Nelson Line	377.9	46.0	24.6	Freeport, Tex.	San Francisco, Cal.	Sulphur, asbestos	6,878	5,434	3,969
Democracy	23	6.35	23	8.30	23	16.58	23	18.15	American.	Nelson Line	377.9	46.0	24.6	Freeport, Tex.	San Francisco, Cal.	Sulphur, asbestos	6,878	5,434	3,969
Point	23	8.35	23	8.50	23	16.18	23	17.15	American.	Swayne & Hoyt.	324.0	46.2	20.0	Corpus Christi, Tex.	Seattle, Wash.	General	2,891	3,984	2,612
Montara	23	11.15	23	9.45	23	17.12	23	18.35	American.	Pacific-Hawaiian S. S. Co.	415.0	55.6	16.7	New York, N. Y.	Tacoma, Wash.	General	2,663	7,643	5,720
San Lucas	23	10.35	23	11.00	23	17.47	23	19.08	American.	Amer-Hawaiian Line	472.3	57.2	17.3	Boston, Mass.	Tacoma, Wash.	General	1,349	9,258	6,944
Mexican	23	15.10	24	6.07	24	13.08	24	15.20	Norwegian.	Knut Knutsen, O. A. S.	375.8	57.0	22.0	Oslo, Norway	Corral, Chile	General	4,188	5,681	3,925
Geisha	23	15.10	24	6.07	24	13.08	24	15.20	Norwegian.	Shell Eastern Pet. Prod.	416.0	56.0	15.6	Perth Amboy, N. J.	Los Angeles, Calif.	General, cattle.	4,188	5,681	3,925
Baldhill	23	22.55	24	6.25	24	13.33	24	14.40	American.	Shell Eastern Pet. Prod.	416.0	56.0	15.6	Perth Amboy, N. J.	Los Angeles, Calif.	Ballast.	6,721	4,680	4,680
K. I.	24	1.50	24	7.25	24	14.45	24	15.40	American.	Luckenbach Line.	446.0	56.0	22.6	Boston, Mass.	Seattle, Wash.	General	4,403	8,552	6,236
Christy	24	3.45	24	7.40	24	15.30	24	16.25	American.	Standard Shipping Co.	477.9	60.0	22.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast.	8,501	5,948	5,948
Payne	24	5.30	24	8.20	24	15.35	24	17.15	American.	Calmar S. S. Corp.	385.3	51.2	19.10	Baltimore, Md.	Seattle, Wash.	Steel, general.	3,945	6,224	4,465
Pennant	24	5.30	24	8.20	24	15.35	24	17.15	American.	Calmar S. S. Corp.	385.3	51.2	19.10	Baltimore, Md.	Seattle, Wash.	Steel, general.	3,945	6,224	4,465

* General, coffee, and bricks.

† Launch.

‡ Motor ship.

§ Yacht.

¶ Tanker.

Real.	14.30	23	14.30	24	21.05	Panamanian	Hans Elliott.	62.0	17.6	5.0	Cristobal, C. Z.	Pedregal, R. P.	46	46	22
Lieut. Col. H. Schumm	24	6.15	24	14.55	American	U. S. Army.	98.0	22.0			Balboa, C. Z.	Balboa, C. Z.			
Q-2 Schumm	24	6.15	24	14.55	American	Oaska Shosen Kaisha	475.0	61.0	23.6		Buenos Aires, Arg.	Kobe, Japan.	5,887	10,173	7,354
Hawai Maru	25	8.20	25	15.34	25	16.35	Japanese								
Lena Locken	25	12.95	25	12.40	25	19.38	25	21.00							
Benj. Kirodor.	25	8.55	25	14.34	25	22.06	25	23.24							
Emil Kirodor.	25	8.55	25	14.34	25	22.06	25	23.24							
Arnosa	25	10.14	25	10.14	American	United Fruit Co.	425.0	53.7	22.0		Houston, Texas	Seattle, Wash.	3,296	7,217	5,295
No. 4849	25	10.14	25	10.14	American	United Fruit Co.	410.0	54.0	17.0		Hamburg, Germany	Valparaiso, Chile.	1,044	7,141	5,468
Santa Clara	25	11.30	25	6.15	26	22.00	American				Cristobal, C. Z.	Gatun, C. Z.	106	8	
Gen. M. H. Sherman.	25	17.10	26	5.55	26	13.58	26	15.30			Cristobal, C. Z.	Gatun, C. Z.	1,701	11,680	7,442
President Adams	26	5.30	26	7.15	26	14.00	26	21.45			Baltimore, Md.	Seattle, Wash.	3,070	6,575	4,912
Romney	26	7.05	26	7.30	26	19.30	British				New York, N. Y.	Around the world.	2,272	12,512	9,178
City of Vancouver	26	9.45	26	10.00	26	17.12	26	23.30			New York, N. Y.	Artica, Chile.	6,983	5,140	
La Perla	26	10.58	26	11.25	26	20.20	British				Antwerp, Belgium	Vancouver, B. C.	6,025	6,614	4,995
Hoysager	26	10.58	26	11.25	26	20.20	Norwegian				Cristobal, C. Z.	San Francisco, Cal.	4,033	2,261	
Memphis City	26	11.20	26	12.10	26	19.24	26	20.43			Rotterdam, Holland	San Francisco, Cal.	6,289	4,723	
Selma City	26	12.35	26	13.25	26	20.16	26	21.45			Baltimore, Md.	San Francisco, Cal.	7,611	5,450	
Tacoma	25	22.35	26	14.40	26	21.20	26	23.30			Montic, Ala.	Seattle, Wash.	2,383	7,611	5,450
West Cape	26	16.40	26	18.10	27	10.34	26	10.34			Hamburg, Germany	Vancouver, B. C.	2,877	10,277	7,904
Baron Wemyss	27	3.30	27	6.10	27	13.25	27	14.35			Philadelphia, Pa.	Seattle, Wash.	2,428	6,566	4,660
Otato	18	17.40	27	9.35	27	16.46	27	17.43			Baltimore, Md.	Paiz, Peru.	3,454	2,460	
Cal.	18	17.40	27	9.35	27	16.46	27	17.43			Liverpool, England.	Pt. Chalmers, N. Z.	5,458	13,016	9,415
Losada	26	19.50	27	10.25	27	17.10	27	18.10			Cristobal, C. Z.	Guayaquil, Ecuador	242	1,105	608
Canada	27	4.40	27	10.50	27	18.00	27	19.15			Hull, England.	Corral, Chile.	3,305	7,221	4,844
Acajudia	19	16.15	27	13.10	27	20.00	27	21.35			Gothenburg, Sweden	Vancouver, B. C.	3,095	7,476	5,383
Cauca	27	18.05	27	14.15	27	21.28	27	21.35			Cristobal, C. Z.	Champorito, Guat.	876	1,272	700
Missourian	17	23.45	27	19.00	28	9.38	28	10.49			Cristobal, C. Z.	Buenaventura, Col.	200	2,062	161
	27	18.45	27	19.00	28	9.38	28	10.49			Boston, Mass.	Portland, Oreg.	3,648	8,561	6,020

1 Tanker. 2 Motor boat. 3 Tug. 4 Ore, cement, and general. 5 Ore, cement, and general. 6 THROUGH THE CANAL—PACIFIC TO ATLANTIC. 7 Panamanian. 8 I. P. Foster. 9 I. P. Foster. 10 Gulf-Pac. Redw'd Line. 11 Nelson S. S. Co. 12 The Texas Co. 13 Shell Oil Co. 14 Mitchell Cream Co. 15 Royal Nech. S. Co. 16 Pacific Steam Nav. Co. 17 Grace Line. 18 Amer-Hawaiian Line. 19 U. S. Army. 20 Panamaian. 21 Colombian. 22 American. 23 American. 24 American. 25 American. 26 British. 27 American. 28 American. 29 American. 30 American. 31 American. 32 American. 33 American. 34 American. 35 American. 36 American. 37 American. 38 American. 39 American. 40 American. 41 American. 42 American. 43 American. 44 American. 45 American. 46 American. 47 American. 48 American. 49 American. 50 American. 51 American. 52 American. 53 American. 54 American. 55 American. 56 American. 57 American. 58 American. 59 American. 60 American. 61 American. 62 American. 63 American. 64 American. 65 American. 66 American. 67 American. 68 American. 69 American. 70 American. 71 American. 72 American. 73 American. 74 American. 75 American. 76 American. 77 American. 78 American. 79 American. 80 American. 81 American. 82 American. 83 American. 84 American. 85 American. 86 American. 87 American. 88 American. 89 American. 90 American. 91 American. 92 American. 93 American. 94 American. 95 American. 96 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MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Venezuela	22	10.30	23	6.36	23	14.15	24	9.05	American.	Panama Mail S. S. Co.	380.0	48.7	22.0	San Francisco, Cal.	New York, N. Y.	General	1,964	6,033	4,353
Real ¹⁴	23	3.00	23	6.40	23	14.25	24	13.15	Panama.	Haus Elliott.	62.2	17.6	6.0	Panama Bay, B. P.	Cristobal, C. Z.	Bananas	40	46	22
Vancouver	23	6.00	23	7.05	23	14.53	23	19.35	German.	Hamburg-American Line	471.5	63.1	27.0	Vancouver, B. C.	Hamburg, Germany	General	8,079	26,377	7,252
Benjamin	22	17.30	23	7.36	23	15.10	23	15.10	American.	Shell Oil Co.	411.6	53.2	26.0	Los Angeles, Calif.	Wilmington, N. C.	Gas, kerosene	9,000	6,228	4,487
Brewster ¹⁵	22	21.00	23	8.44	23	15.50	23	15.50	Norwegian.	Fearnley & Eger.	382.7	53.4	20.3	Vancouver, B. C.	Wilmington, Eng.	General	7,370	6,112	4,284
J. L. Luckenbach	22	22.15	23	9.13	23	16.15	23	16.15	American.	Luckenbach Line.	448.9	60.2	30.0	Portland, Ore.	Boston, Mass.	General, lumber	9,221	9,994	6,861
Tain Xin ¹⁶	22	16.20	23	9.28	23	17.10	23	23.49	Norwegian.	Barber S. S. Line.	441.4	69.9	23.0	New York, N. Y.	New York, N. Y.	General	5,519	9,607	7,063
Astrolabe	23	3.00	23	9.45	23	18.10	23	23.30	French.	Messageries Marit's Co.	351.0	52.5	23.0	Yonneau, N. Cal.	Dunkirk, France.	General, copra	3,570	5,580	3,797
Paris City	23	5.50	23	10.15	23	18.40	23	18.40	British.	Mitchell Grain, Ltd.	412.2	53.0	29.0	Vancouver, B. C.	Cobb, I. F. S. ¹⁷	Wheat	8,953	6,073	4,794
Ani	23	11.20	23	12.15	23	20.50	23	23.59	Belgian.	Cy. Int. Com. & Arm't.	400.5	52.1	28.0	Coopilla, Chile.	Azores	Nitrate of soda.	8,100	6,017	4,782
Cubore ¹⁸	23	17.15	23	17.58	24	13.25	23	13.25	American.	Galmar S. S. Corp.	456.6	57.2	29.0	Portland, Ore.	Philadelphia, Pa.	Lumber	8,305	.....	.....
Eldena	24	00.30	24	6.58	24	13.05	24	13.05	American.	Tampa Intercean Co.	409.6	54.2	28.0	Kobe, Japan.	New York, N. Y.	General	5,465	.....	.....
Taranaki	24	2.45	24	12.43	24	19.20	24	19.20	British.	Shaw, Savill & Albion.	483.0	64.2	25.0	Pt. Chalmers, N. Z.	London, England	Frozen, general	9,012	11,706	8,320
Loohakine ¹⁹	24	14.15	24	15.14	25	11.40	25	15.00	British.	Royal Mail S. P. Co.	485.4	62.3	29.3	Vancouver, B. C.	Rotterdam, Holland	General	9,785	10,802	7,585
La Perla	24	15.45	25	6.28	25	13.05	25	11.25	American.	United Fruit Co.	409.7	54.2	24.3	San Francisco, Cal.	Cristobal, C. Z.	General	9,779	4,033	2,261
Pacific Oak	25	1.15	25	7.05	25	14.10	25	14.10	American.	Dimon S. S. Corp.	424.8	55.2	24.0	Seattle, Wash.	Baltimore, Md.	Lumber, general	7,848	6,087	4,574
Robin Hood	25	3.45	25	7.19	25	14.50	25	14.50	American.	Isthmian S. S. Lines	325.2	54.2	24.3	Seattle, Wash.	Baltimore, Md.	Lumber, general	7,014	7,473	5,553
Corinthic	25	9.50	25	10.21	25	18.30	26	09.05	British.	Shaw, Savill & Albion.	500.3	63.3	24.0	Auckland, N. Z.	London, England	General, frozen	3,700	12,821	9,507
Virgilio ²⁰	25	10.20	25	10.51	25	17.30	27	11.15	Italian.	Nav. Gen. Italiana.	482.2	61.8	24.0	Valparaiso, Chile.	Genoa, Italy	General	1,590	12,941	9,329
Cerigo	25	13.45	25	14.35	25	22.10	26	13.05	German.	Hamburg-American Line	227.8	34.4	15.0	Gusayqui, Ecuador	Cristobal, C. Z.	General	755	1,572	1,011
Jefferson Myers	25	16.30	25	17.19	26	13.05	26	13.05	American.	States S. S. Co.	440.0	56.0	27.0	Portland, Ore.	Philadelphia, Pa.	Lumber, general	8,425	8,300	6,020
Chloro	26	2.00	26	6.05	26	16.00	26	16.00	American.	Ore S. S. Corp.	550.0	72.2	35.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	21,600	14,538	4,480
Western Sun ²¹	26	4.15	26	6.37	26	17.00	26	17.00	American.	Sun Oil Co.	480.6	66.0	28.0	Los Angeles, Calif.	Maricus Hook, Pa.	Gasoline	12,826	9,607	6,551
Zealandic ²²	25	23.00	26	7.26	26	18.05	26	18.00	British.	Shaw, Savill & Albion.	482.6	64.2	23.0	Wellington, N. Z.	London, England	General	4,504	11,819	8,367
San Silvestre ²³	26	6.00	26	7.55	26	18.20	26	20.40	British.	Shell Oil Co.	420.5	54.6	20.2	Valparaiso, Chile.	Pto. Mexico, Mex.	Ballast	6,588	.....	4,546
S-11 ²⁴	26	8.00	26	8.00	26	19.10	.....	.....	American.	U. S. Navy	231.0	20.0	.....	Balboa, C. Z.	Cristobal, C. Z.	Towing barge	13,567	9,620	6,476
Lieut. Col. H. C. Schumm ²⁵	26	7.15	26	8.53	26	19.40	26	19.40	American.	Sun Oil Co.	480.6	56.0	29.0	Los Angeles, Calif.	Chester, Pa.	Gasoline	5,500	5,367	2,900
Henry D.	26	8.00	26	9.16	26	20.20	26	20.20	American.	Dutton Lumber Co.	356.0	61.6	26.0	Tacoma, Wash.	Providence, R. I.	Lumber	8,044	8,567	6,020
Californian ²⁶	26	15.10	26	16.18	27	12.15	27	12.15	American.	Amer.-Hawaiian Line	445.1	59.8	26.1	Seattle, Wash.	Boston, Mass.	General	5,000	4,603	2,996
Pueblo ²⁷	26	23.30	27	6.48	27	14.00	27	14.00	American.	J. Barry & Son.	340.0	49.0	25.0	Los Angeles, Calif.	Trevorton, R. I.	Gasoline	8,425	6,612	4,754
Sage Bush	27	1.30	27	7.05	27	14.45	27	14.45	American.	Shepard S. S. Co.	409.8	54.2	25.2	Seattle, Wash.	Boston, Mass.	Lumber, general	8,425	6,352	4,620
Somersby	27	8.45	27	9.19	27	18.55	27	18.50	British.	Empire Shipping Co.	421.2	54.3	26.0	Victoria, B. C.	United Kingdom	Wheat	8,423	6,352	4,620
Norfolk	27	10.10	27	11.27	27	16.35	27	21.15	British.	Federal Steam Nav. Co.	520.0	64.2	22.0	Bluff, N. Z.	Glasgow, Scotland	Frozen, general	4,769	12,953	9,265

¹ Tanker. ² Motor ship. ³ Submarine. ⁴ All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian. ⁵ For orders.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
June 21	Santoro	Ore S. S. Corp.	Norfolk, Va.	June 21	No. 300-N ²¹	Pan American-Grace Airways	Pimental via wayports.
June 22	Stella Lykes	Lykes Brothers S. S. Co.	Lake Charles, La.	June 21	No. 608-M ²¹	Pan American Airways	Miami via wayports.
June 22	Dora K. ²²	A. L. Surgeon	Santa Marta, Colombia.	June 21	No. 9670 ²¹	Pan American Airways	San Salvador and waypts.
June 23	Flandre	French Line	St. Nazaire and wayports.	June 21	Costarica	Royal Netherlands S. S. Co.	Amsterdam via waypts.
June 23	Pastores	United Fruit Co.	Santa Marta, Colombia.	June 21	Ancon	Panama R. S. S. Line	New York via Haiti.
June 23	No. 300-N ²³	Pan American-Grace Airways	Pimental via wayports.	June 23	Stella Lykes	Lykes Brothers S. S. Co.	Galveston and wayports.
June 23	Inapaquina ²⁴	A. Tagaropulos	Colon, Rep. of Panama.	June 23	C. C. Acme ²⁶	R. Foster	San Andros, Colombia.
June 23	Anachucua ²⁴	A. Tagaropulos	Colon, Rep. of Panama.	June 23	Santoro	Ore S. S. Corp.	Daiquiri, Cuba
June 24	Metapan	United Fruit Co.	New York via Kingston.	June 23	Inapaquina ²⁴	A. Tagaropulos	Colon, Rep. of Panama.
June 24	Swiftagle	Shell Eastern Petroleum Co.	New Orleans via Kingston.	June 24	Anachucua ²⁴	A. Tagaropulos	Colon, Rep. of Panama.
June 24	No. 695-M ²⁴	Pan American Airways	Miami via wayports.	June 24	Pastores	United Fruit Co.	New York via Kingston.
June 25	No. 9688 ²³	Pan American Airways	San Salvador via waypts.	June 24	No. 697-M ²³	Pan American Airways	Miami via wayports.
June 25	Baracoa	Colombian S. S. Line	New York via wayports.	June 24	No. 9664 ²³	Pan American Airways	Sal Salvador and waypts.
June 26	Tolosa	United Fruit Co.	New Orleans via Habana.	June 24	Flandre	French Line	Hayre via wayports.
June 26	Cefala	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	June 25	No. 144-M ²³	Pan American-Grace Airways	Pimental via wayports.
June 26	No. 698-M ²³	United Fruit Co.	Colon, Rep. of Panama.	June 25	Metapan	United Fruit Co.	Colonian ports.
June 26	H. Blackwood	P. W. Hamilton	Port Limon, Costa Rica.	June 25	Irona	Shell Eastern Petroleum Co.	Port Limon, Costa Rica.
June 27	Annetta I. ²⁴	H. Blackwood	Colon, Rep. of Panama.	June 25	Swiftagle	Shell Eastern Petroleum Co.	Curacao, D. W. I.
June 27	Teutonia	United Fruit Co.	Tampico, Mexico.	June 26	Nora B. ²⁵	H. Blackwood	Port Limon, Costa Rica.
June 27	No. 9670 ²³	Hamburg-American Line	San Salvador and waypts.	June 26	Baracoa	Colombian S. S. Line	New York via wayports.
June 27	No. 144-M ²³	Pan American-Grace Airways	Pimental via wayports.	June 26	Tolosa	United Fruit Co.	New York via wayports.
June 27	No. 698-M ²³	Pan American Airways	Miami via wayports.	June 27	Annetta I. ²⁴	P. W. Hamilton	Colon, Rep. of Panama.
June 27	No. 698-M ²³	Pan American Airways	Miami via wayports.	June 27	Cefala	Standard Fruit & S. S. Co.	New Orleans and waypts.
June 27	No. 698-M ²³	Pan American Airways	Miami via wayports.	June 27	Irona	Standard Fruit & S. S. Co.	New Orleans and waypts.

PORT OF BALBOA.

June 23	Baden Baden ²⁷	H. J. Lan.	Puntarenas, Costa Rica.	June 24	Baden Baden ²⁷	H. J. Lan.	Puntarenas, Costa Rica.
June 23	Motor ship.	Air mail carrier.	Motor schooner.	June 23	Motor ship.	Schooner.	Motor schooner.

* Other than ships passing through the Canal.

Exclusion of Members of Hindoo Race from Panama.

The Acting Chief Quarantine Officer has issued a circular to steamship agents and others concerned quoting for their information a decree issued by the Government of Panama under date of May 27, 1931, relating to the exclusion of members of the Hindoo race from the Republic of Panama.

Under agreement with the Republic of Panama, the authorities of the Panama Canal endeavor to enforce in the Canal Zone the exclusion of persons whose entry into Panama is forbidden by Panama. Accordingly, in harmony with the decree quoted below, the Canal authorities will not permit entry of Hindoos except under the conditions established by the decree. Transit passengers or members of crew of this race will be held aboard the vessel or detained at the Balboa quarantine station unless special permission has been granted for their temporary entry by the Government of Panama; passengers of this race destined for Panama will be held by the quarantine authorities unless or until their entry into Panama has been authorized.

The circular of the Acting Chief Quarantine Officer follows:

THE PANAMA CANAL, HEALTH DEPARTMENT,
BALBOA HEIGHTS, C. Z., June 22, 1931.

TO ALL STEAMSHIP AGENTS AND OTHERS CONCERNED:

The following translation of Decree No. 43 of the Panamanian Government relating to the exclusion of members of the Hindoo race, is transmitted for your information:

JOHN D. ODOM,
Acting Chief Quarantine Officer.

DECREE NUMBER 43 OF 1931 (of May 27th) explaining further Article 2 of Law 71 of 1930.

The First Designate, in charge of the National Executive Power in the performance of his legal duties,

WHEREAS: Article 2 of Law 71 of 1930 reads as follows: "The Executive Power is hereby authorized to restrict or forbid the immigration of elements or laborers engaged in certain trades which places the native laborers who live together with them, in a precarious economical situation;"

That from experience had and after investigations made by the Foreign Relations Office it has been fully established, that the Hindoos who arrive in the country become a source of destructive competition to native laborers, due to the class of work that they undertake and the money consideration under which they are contracted to come to the Isthmus;

That notwithstanding the fact that the immigration of elements of the said nationality has been restricted, because the said immigration was considered undesirable due to racial and economical reasons; however, there is in the country at present a large number of Hindoos, engaged in all kinds of trades;

That the large number of laborers who are domiciled in the country are just sufficient to attend to the needs of the Hindoo commercial establishments that are operated in the cities of Panama and Colon, under which guarantee the immigration to the country of the largest portion of such elements has been permitted; and

That it is the duty of the Executive Power, by making use of the legal authority quoted in the initial paragraph above, to take all necessary steps by which to favor native laborers, particularly in these days of general crisis.

DECREES:

ARTICLE ONE.—The immigration into the country of elements of the Hindoo race is prohibited effective this date, with the exception of those who after submitting satisfactory proofs to the Office of the Secretary of Foreign Relations are coming with enough capital to establish themselves here.

Be it communicated and published.

Given at Panama, on the twenty-seventh day of the month of May, 1931.

(Sgd.) R. J. ALFARO.

The Secretary of Foreign Relations,
(Sgd.) J. J. VALLARINO.

"Iroquois" Makes Fast Run from New York.

The coastwise passenger steamer *Iroquois* of the Clyde-Mallory Line, arrived at Cristobal at 6 o'clock on the morning of June 22, 1931, en route to Los Angeles. She made transit of the Canal and cleared from Balboa the same day for the west-coast port. The voyage from New York to Cristobal was made in the fast time of 4 days and 14 hours, the vessel having left New York at 4 p. m., Wednesday, June 17. The *Iroquois*, which was built in 1927 to participate in the traffic between New York and Miami, has been recently chartered to the Los Angeles Steamship Company to replace the *Harvard* which grounded off San Francisco some time ago.

The *Iroquois* is 394 feet long, 62 feet beam, and of 6,210 gross tons. No passengers were carried on the voyage from New York to Los Angeles. It was expected that the ship would reach Los Angeles at 6 a. m., June 29, 7 days after arrival at Cristobal and 11 days 14 hours from New York.

Revision of Room Rates at Hotel Tivoli.

Effective June 1, 1931, room tariff at the Hotel Tivoli, Ancon, was revised. Formerly all rates in the off-season, May to November, were lower than those charged during the tourist season, December to April. According to the new tariff, rates for the higher grade rooms will be uniform during the entire year. The rate on rooms without bath has been considerably reduced. There have also been reductions in the rates for all grades of rooms when occupied by two persons.

The new daily rates now in effect for parlor and bedroom with bath, are \$12 single, \$16 double. For Grade A room with bath, \$6 single, \$8 double. For Grade 1 room with bath, \$5 single, \$7 double, during the tourist season, December to April, inclusive, and \$4 single, \$6 double, at other times. For Grade 2 room without bath, \$3 single, \$4.50 double, during tourist season, and \$2.50 single, \$4 double, at other times.

Directory of The Panama Canal.

Executive Department.

Headquarters, Balboa Heights.

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 H. A. McCONAUGHEY, representing employees.
- Board on Complaints Concerning Working Conditions:*
 MAJ. J. C. MEHAFFEY, and Head of Department or Division interested, representing The Panama Canal.
 H. A. McCONAUGHEY and CHAS. F. WAHL, representing employees.

The Panama Canal in the United States.

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Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending June 27, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Orinoco.....	Hamburg-American Line.....		June 14.....		349
Itauri.....	Hamburg-American Line.....	June 14.....	June 14.....	84	76½
Delftdijk.....	Holland-America Line.....	June 14.....	June 15.....	162	7
Peter Kerr.....	Quaker S. S. Line.....	June 14.....	June 15.....	75	(²)
Costarica.....	Royal Netherlands S. S. Co.....		June 15.....		19
Guayaquil.....	Panama R. R. S. S. Line.....		June 15.....		80
C. C. Acme.....	R. C. Foster.....	June 15.....		2	
Duchess D'Acosta.....	Navigazione Libera-Triestina.....	June 15.....	June 15.....	9	(²)
Erfurt.....	North German Lloyd.....	June 15.....	June 16.....	(¹)	220

¹ No cargo discharged.

² No cargo laded.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Santa Elisa	Grace Line	June 15	June 16	161	165
Nosa King	N. O. & S. A. S. S. Co.	June 15	June 16	183	90
Los Angeles	Hamburg-American Line	June 16	June 16	93	104
Canadian Conqueror	Canadian National Steamships	June 16	June 16	120	(²)
West Nilus	McCormick S. S. Co.	June 16	June 17	10	117
Zacapa	United Fruit Co.	June 16	June 17	59	712
Davision	Leyland S. S. Line	June 16	June 17	397	(²)
Magallanes	Spanish S. S. Line	June 16	June 20	193	215½
Anachucuna	A. Tagaropulos	June 16	June 17	51	(²)
Tela	United Fruit Co.	June 17	June 18	1,433	154
Pastores	United Fruit Co.	June 17	June 18	516	385
Ancon	Panama R. R. S. S. Line	June 17	June 18	2,260	.....
President Madison	Dollar Line	June 18	June 18	70	(²)
Nosa Chief	N. O. & S. A. S. S. Co.	June 18	June 18	232	32
Cali	Roland Line	June 18	June 18	826	.....
Patricia	Hamburg-American Line	June 18	June 19	48	447
Caldas	National Navigation Co.	June 18	June 18	.....	125
Lagarto	Pacific Steam Navigation Co.	June 18	June 18	19	24
Amerika	Danish-East Asiatic Line	June 18	June 18	2	(²)
Timavo	Navigazione Libera-Tristina	June 18	June 19	(²)	153
Ferdejord	Canadian Transport Co.	June 18	June 19	240	(²)
Cauca	National Navigation Co.	June 18	June 19	174	.....
Calamares	United Fruit Co.	June 19	June 19	238	119
Pearl Marie	R. Feuillebois	June 19	June 19	(²)	23
Tsuyama Maru	Nippon Yusen Kaisha	June 19	June 19	98	(²)
Sanyo Maru	Osaka Shosen Kaisha	June 19	June 19	207	(²)
Acajutla	Pacific Steam Navigation Co.	June 19	June 19	965	.....
Costarica	Royal Netherlands S. S. Co.	June 19	June 19	7	.....
Camden	United Fruit Co.	June 19	June 19	4,799	.....
Santa Rita	Grace Line	June 19	June 20	187	295
Atlantida	Standard Fruit & S. S. Co.	June 19	June 20	322	178
Colombia	Panama Mail S. S. Co.	June 20	June 20	188	.....
Buenaventura	Panama R. R. S. S. Line	June 20	June 20	228	(²)
Goslar	North German Lloyd	June 20	June 20	49	447
Laurits Swenson	Fred Olsen & Co.	June 20	June 20	(²)	452
Durazzo	Hamburg-American Line	June 20	June 20	.....	301
Tela	United Fruit Co.	June 20	June 20	71	252
Alabama	French Line	June 20	June 20	100	.....
Ancon	Panama R. R. S. S. Line	June 20	June 21	.....	947
Costarica	Royal Netherlands S. S. Co.	June 20	June 21	.....	723
Colombia	Panama Mail S. S. Co.	June 20	June 21	.....	553
Alabama	French Line	June 20	June 21	.....	22
Designer	T. & J. Harrison	June 21	June 22	333	(²)
Gregalia	Donaldson Brothers	June 22	June 22	(²)	109
Santa Maria	Grace Line	June 22	June 22	137	252
S'ella Lykes	Lyles Brothers	June 22	June 23	631	14
Orduna	Pacific Steam Navigation Co.	June 22	June 23	26	(²)
San Lucas	Pacific-Atlantic S. S. Co.	June 22	June 23	38	(²)
George Washington	Fred Olsen & Co.	June 22	June 23	427	(²)
Flandre	French Line	June 22	June 24	25	664
Jason	Royal Netherlands S. S. Co.	June 22	June 22	30	54
Baarn	Royal Netherlands S. S. Co.	June 22	June 22	93	74
Tai Yin	Barber S. S. Line	June 23	June 23	285	56
Vancouver	Hamburg-American Line	June 23	June 23	2	104
Venezuela	Panama Mail S. S. Co.	June 23	June 24	942	9
Pastores	United Fruit Co.	June 23	June 24	94	640
Iriona	United Fruit Co.	June 24	June 25	993	14
Metapan	United Fruit Co.	June 24	June 25	701	373
Swiftagle	Mallory S. S. Line	June 24	June 25	11,780	(²)
Emil Kirdorf	Hamburg-American Line	June 25	June 25	27	130
Loehkatrine	Royal Mail Steam Packet Co.	June 25	June 25	(²)	43
Baraoa	Colombian S. S. Line	June 25	June 26	290	432
Gen. M. H. Sherman	Arrow S. S. Line	June 25	June 26	281	(²)
La Perla	United Fruit Co.	June 25	June 26	1,107	(²)
Santa Clara	Grace Line	June 25	June 26	287	434
Taoma	Hamburg-American Line	June 25	June 26	189	241
Virgilio	Italian S. S. Line	June 25	June 27	15	14
Cerigo	Hamburg-American Line	June 25	June 26	755	.....
Nora B.	H. Blackwood	June 26	June 26	(²)	3
Tolosa	United Fruit Co.	June 26	June 26	265	45
Orazio	Italian S. S. Line	June 26	June 26	215	.....
Cefalu	Standard Fruit & S. S. Co.	June 26	June 27	222	181
Losada	Pacific Steam Navigation Co.	June 26	June 27	1	64
Cali	Roland Line	June 27	June 27	.....	243
Acajutla	Pacific Steam Navigation Co.	June 27	June 27	.....	876
Teutonia	Hamburg-American Line	June 27	June 27	14	.....
Canada	Johnson S. S. Line	June 27	June 27	99	(²)
Iriona	United Fruit Co.	June 27	June 27	11	343
Cauca	National Navigation Co.	June 27	June 27	360

² No cargo discharged.

² No cargo laded.

THE PANAMA CANAL RECORD

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Volume XXIV.

Balboa Heights, C. Z., July 8, 1931.

No. 49.

Traffic by Nationality for June, 1931.

The following tabulation shows the commercial traffic through the Canal during the month of June, 1931, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for June, 1930 and 1929:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,030	3,214	5,045	3,140	\$2,901.60	.....
British.....	50	269,750	191,190	322,728	194,426	220,298.95	104,066
Chilean.....	3	4,828	3,497	8,032	4,220	4,371.25	1,311
Colombian.....	4	570	550	880	550	668.90	475
Danish.....	6	35,175	25,090	42,597	26,493	27,552.79	7,804
Danzig.....	1	8,224	7,068	12,175	6,974	5,921.28	.....
Dutch.....	5	25,916	16,163	27,883	16,251	19,648.18	6,527
French.....	3	16,049	10,233	18,120	10,285	12,791.25	6,050
German.....	14	58,219	40,141	67,407	40,186	50,176.25	21,398
Italian.....	3	21,498	14,229	26,639	16,230	17,786.25	3,178
Japanese.....	9	50,050	41,697	61,663	39,642	49,887.12	35,999
Norwegian.....	10	50,398	32,371	54,527	32,654	38,886.30	37,858
Panamanian.....	1	22	24	45	29	26.40	46
Swedish.....	5	25,419	17,084	47,013	20,734	18,417.74	7,406
United States.....	93	511,177	384,200	624,197	383,861	447,278.32	249,860
Yugoslav.....	2	9,948	7,158	11,748	7,122	7,162.56	.....
Total, June, 1931.....	210	1,091,273	793,824	1,330,699	802,800	923,775.14	472,778
Total, June, 1930.....	259	1,291,603	980,994	1,633,780	992,514	1,099,764.87	699,652
Total, June, 1929.....	272	1,287,393	977,989	1,604,457	981,033	1,117,940.01	899,385

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	8,757	7,305	11,494	7,815	\$9,131.25	15,276
British.....	52	279,843	209,041	343,818	210,008	258,607.31	349,408
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	1,171
Colombian.....	5	630	599	977	599	718.10	958
Danish.....	6	29,647	21,571	30,637	18,618	26,963.75	45,431
Danzig.....	1	8,224	7,068	12,175	6,974	8,835.00	15,799
Dutch.....	4	15,902	10,275	17,194	10,447	12,843.75	22,780
French.....	4	20,382	13,848	24,518	14,248	17,310.00	27,066
German.....	14	57,130	38,381	64,011	38,689	47,253.90	69,124
Italian.....	2	15,135	9,577	19,267	11,470	11,971.25	9,601
Japanese.....	4	23,409	19,078	29,800	18,774	23,847.50	26,636
Norwegian.....	10	51,945	34,513	57,791	31,762	45,147.50	79,371
Panamanian.....	1	22	24	45	29	30.00	40
Swedish.....	3	15,017	9,930	25,949	12,370	12,412.50	35,375
United States.....	81	436,525	336,542	550,292	337,434	420,224.25	537,167
Total, June, 1931.....	190	967,273	721,223	1,194,678	726,193	897,633.59	1,286,498
Total, June, 1930.....	219	1,066,634	803,976	1,337,332	812,704	1,001,229.66	1,447,529
Total, June, 1929.....	231	1,065,038	809,790	1,341,724	815,965	1,009,865.96	1,524,616

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	3	12,787	10,519	16,539	10,955	\$12,032.85	15,276
British.....	102	549,593	400,141	666,546	404,434	478,906.29	453,469
Chilean.....	4	9,533	6,963	15,342	8,196	8,703.75	2,282
Colombian.....	9	1,200	1,149	1,857	1,149	1,387.00	1,433
Danish.....	12	64,822	46,661	72,634	45,111	54,516.54	54,235
Danzig.....	2	16,448	14,136	24,350	13,948	14,756.28	15,799
Dutch.....	9	41,818	26,443	45,077	26,698	32,491.93	29,307
French.....	7	36,431	24,081	42,638	24,533	30,101.25	33,116
German.....	28	115,349	78,522	131,418	78,855	97,435.15	90,522
Italian.....	5	36,633	23,806	45,906	27,700	29,757.50	12,779
Japanese.....	13	73,459	60,775	91,463	58,416	73,734.62	62,635
Norwegian.....	20	102,343	66,889	112,318	67,416	82,033.80	117,229
Panamanian.....	2	44	48	90	58	56.40	86
Swedish.....	8	40,436	27,014	72,962	33,104	30,830.24	42,781
United States.....	174	947,702	720,742	1,174,489	721,298	867,502.57	828,027
Yugoslav.....	2	9,948	7,158	11,748	7,122	7,162.56	.....
Total, June, 1931.....	400	2,058,546	1,515,047	2,525,377	1,528,993	1,821,408.73	1,758,976
Total, June, 1930.....	478	2,358,237	1,784,970	2,971,112	1,805,218	2,100,994.53	2,147,181
Total, June, 1929.....	503	2,352,431	1,787,779	2,946,181	1,797,003	2,127,805.97	2,424,002

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending June 27, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
St. Mihiel.....	U. S. Government.....	June 19.....	June 23.....	489	118
Colombia.....	Panama Mail S. S. Co.....	June 21.....	June 22.....	27	.....
Santa Maria.....	Grace Line.....	June 22.....	June 22.....	9	.....
Venezuela.....	Panama Mail S. S. Co.....	June 22.....	June 23.....	109	1
Tai Yin.....	Barber S. S. Line.....	June 22.....	June 23.....	374	.....
Baarn.....	Royal Netherlands S. S. Co.....	June 22.....	June 23.....	100	.....
Baden Baden.....	H. J. Lau.....	June 23.....	June 24.....	24	.....
George Washington.....	Fred Olsen & Co.....	June 23.....	June 24.....	1,503	1
La Perla.....	United Fruit Co.....	June 24.....	June 25.....	374	23

Tanker Traffic Through the Panama Canal in June, 1931.

During the month of June, 1931, 49 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 282,563, on which tolls of \$250,826.69 were paid. Cargo amounted to 277,228 tons, comprised of 270,528 tons of mineral oils and 6,700 tons of coconut oil.

In point of net tonnage, tanker traffic decreased 35.3 per cent in comparison with the tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 39.9 per cent.

Tank ships comprised 12.3 per cent of the total commercial transits through the Canal during the month; made up 13.7 per cent of the total Panama Canal net tonnage; were source of 13.8 per cent of the tolls collected; and carried 15.8 per cent of the total cargo through the Canal. These are the lowest proportions for tanker traffic for any month since the beginning of large shipments from the California field in 1922.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of June, 1931, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for June, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	3	18,796	\$13,533.12	.....
Danzig.....	1	8,224	5,921.28	.....
Norwegian.....	1	4,317	3,108.24	.....
United States.....	18	105,977	77,404.68	8,457
Total, June, 1931.....	23	137,314	99,967.32	8,457
Total, May, 1931.....	31	168,495	125,916.68	13,740
Totals, April, 1931.....	31	178,523	131,825.47	16,767
Total, June, 1930.....	65	345,896	256,991.09	27,972
<i>Pacific to Atlantic.</i>				
British.....	7	34,611	35,926.87	60,339
Danzig.....	1	8,224	8,835.00	15,799
Norwegian.....	2	12,506	13,095.00	23,253
United States.....	16	89,908	93,002.50	* 169,380
Total, June, 1931.....	26	145,249	150,859.37	268,771
Total, May, 1931.....	30	174,281	177,326.75	316,294
Total, April, 1931.....	38	225,203	231,846.94	403,030
Total, June, 1930.....	44	245,517	251,649.15	432,961

* Includes 6,700 tons coconut oil.

The following tabulation shows the tanker traffic through the Canal during June, 1931, classified according to trade routes:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
United States intercoastal.....	17	97,358	\$71,199.00	8,457
United States to South America.....	1	4,326	3,114.72	.....
Canada to South America.....	2	14,470	10,418.40	.....
Europe to United States.....	2	12,936	9,313.92	.....
Europe to South America.....	1	8,224	5,921.28	.....
<i>Pacific to Atlantic.</i>				
United States intercoastal.....	15	86,192	89,123.75	162,680
United States to West Indies.....	1	6,839	7,008.75	12,491
United States to Europe.....	3	14,386	14,902.50	24,987
South America to United States.....	1	4,326	4,633.75	7,957
South America to Canada.....	2	13,964	15,613.75	32,173
South America to Central America.....	1	4,546	3,273.12	.....
South America to Europe.....	2	11,550	12,425.00	21,783
Philippine Islands to United States.....	1	3,716	3,878.75	* 6,700

* Coconut oil.

Of the tanker traffic passing through the Canal in June, 1931, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the the two preceding months and for June, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
June, 1931.....	19	110,294	\$80,512.92	8,457
May, 1931.....	22	116,497	85,220.49	3,748
April, 1931.....	24	134,042	96,510.24	.....
June, 1930.....	56	300,724	219,484.66	9,782
<i>From Los Angeles.</i>				
June, 1931.....	17	98,042	101,297.50	183,831
May, 1931.....	20	115,283	116,952.50	212,030
April, 1931.....	26	147,531	152,761.60	266,202
June, 1930.....	33	189,882	191,944.40	330,780

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, July 4, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Orazio ²	26	8 05	28	6 00	28	13 05	28	14 20	Italian	482.8	61.0	23.5	Genoa, Italy.	Valparaiso, Chile	General	1,065	12,977	9,373
Illinois ¹	27	20 45	28	6 20	28	13 23	28	14 45	American	416.8	58.1	21.0	New York, N. Y.	Los Angeles, Calif	Ballast	6,945	5,011	
Challenger ²	27	23 35	28	7 10	28	14 24	28	15 40	American	410.0	56.0	21.0	Baltimore, Md.	Vancouver, B. C.	Steel, general	3,689	7,780	5,811
Japanese																		
Prince ²	28	1 20	28	8 25	28	15 00	28	16 00	British	441.0	60.0	19.6	New York, N. Y.	Manila, P. I.	General	3,043	9,240	6,145
San Bernardino	28	12 00	28	14 30	28	21 25	28	22 42	American	410.5	54.2	17.8	Philadelphia, Pa.	Seattle, Wash.	General	2,413	6,755	4,873
Credle Jefe ¹	28	18 30	29	6 03	29	13 30			Venezuelan	325.0	55.0	10.6	Manzanillo, Venez.	Batavia, C. Z.	Ballast	10,405	7,401	
Trojanstar ²	28	23 05	29	6 15	29	15 40			British	473.0	62.0	23.0	N. Shields, England	Vancouver, B. C.	Ballast	5,689	4,630	
Boliver ²	29	1 00	29	7 10	29	15 20			Belgian	501.0	52.0	15.0	Antwerp, Belgium	Vancouver, B. C.	Ballast	15,560	4,490	
Amerikaland ²	29	12 10	29	12 25	29	18 30	30	00 10	Swedish	383.0	72.0	22.3	Baltimore, Md.	Cruz Grande, Chile	Ballast	1,638	6,355	4,631
Wido.	29	19 20	29	13 20	29	20 11	29	21 30	German	436.0	93.0	25.0	Hamburg, Germany	Valparaiso, Chile	General	2,900		
Cambrai ⁴	29	2 05	29	14 33	29	20 48	30	12 55	American	450.0	98.0	20.0	Brooklyn, N. Y.	San Francisco, Cal.	General	1,643	8,878	6,588
Nebraska	29	17 40	30	6 00	30	14 30	15	30	British	460.0	62.0	19.0	London, England	Vancouver, B. C.	General	3,909	8,703	6,777
Kwanto Maru	29	21 25	30	6 45	30	14 22	30	15 30	Japanese	460.0	62.0	19.0	Philadelphia, Pa.	Vancouver, B. C.	General	3,909	8,703	6,777
Daylight ²	30	2 09	30	8 35	30	16 24	30	17 30	American	481.0	66.0	22.6	New York, N. Y.	Shanghai, China.	Ballast	2,586	7,107	5,041
Pennsylvania	30	11 15	30	11 20	30	17 43	30	20 18	American	407.7	53.7	20.0	Boston, Mass.	Seattle, Wash.	General	2,586	7,107	5,041
Huacuat	30	13 00	30	13 10	30	20 45	30	21 43	American	454.0	56.2	20.1	Baltimore, Md.	Los Angeles, Calif.	Ballast	2,200	7,394	5,009
Silverteak ²	30	16 50	30	17 05	1	11 37	1	12 30	British	456.0	62.0	17.0	New York, N. Y.	Singapore, St. Sect.	General	2,200	9,376	6,018
Canadian																		
Spinner.	30	22 20	1	6 15	1	13 25	1	14 30	British	413.0	52.0	17.0	Montreal, Canada.	Vancouver, B. C.	General	2,115	5,871	4,094
Hague Maru	1	9 50	1	10 00	1	16 51	1	18 15	Japanese	407.3	50.0	15.6	New York, N. Y.	Yokohama, Japan.	Bottom, general	6,664	6,583	4,772
Tercero ²	1	8 15	1	11 25	1	18 25	1	19 43	Norwegian	368.5	53.7	13.4	Philadelphia, Pa.	Arica, Chile.	Ballast	2,809	8,400	6,162
San Julian	1	00 20	1	12 10	1	19 05	1	20 29	American	468.0	58.5	18.7	Philadelphia, Pa.	Portland, Oreg.	General	2,809	8,400	6,162
Horace Luck																		
embasc.	1	9 35	1	12 55	1	20 00	1	21 24	American	445.0	58.0	19.8	Boston, Mass.	Seattle, Wash.	General	3,000	8,699	6,363
Marbaha.	1	12 15	1	13 20	1	20 54	1	22 00	British	403.0	52.0	15.6	Norfolk, Va.	Toopitilla, Chile	Ballast	5,629	4,183	
Villager ²	30	18 50	1	14 30	1	21 51	1	22 50	Norwegian	398.0	54.7	19.5	Rosario, Argentine.	Vancouver, B. C.	General, bananas	3,805	6,869	5,131
Oregon ²	1	13 15	2	5 55	2	13 05	2	14 00	French	468.1	61.3	18.7	Dunkirk, France.	Vancouver, B. C.	Coal, general	1,842	10,332	7,466
Tidewater																		
Associated ²	1	21 50	2	6 05	2	13 33	2	15 55	American	481.0	66.0	21.0	New York, N. Y.	Los Angeles, Calif	Ballast	9,742	6,373	
New Jersey ¹	2	6 30	2	7 05	2	14 00	2	15 05	American	417.0	56.0	20.6	New York, N. Y.	Los Angeles, Calif.	Ballast	6,925	4,952	
Adellen ²	2	00 50	2	9 25	2	16 16	2	17 30	British	460.0	60.0	25.0	Antwerp, Belgium	Seattle, Wash.	Crescote	9,741	8,256	5,854
Scottish																		
Borderer ²	2	4 00	2	13 05	2	21 09	2	22 30	British	426.0	56.0	19.2	Androssan, England	Los Angeles, Calif	Ballast	7,149	4,927	
Asheville	19	11 35	2	14 14					American	225.0	41.0		Gatun, C. Z.	Gatun, C. Z.	Ballast	116	6,833	5,308
Taranger ²	1	20 15	2	16 35	3	9 36	3	10 40	Norwegian	398.0	54.0	14.6	Rotterdam, Holland	Vancouver, B. C.	Bananas	3,795	5,684	4,070
Willfar	2	16 45	2	16 55	3	11 25	3	12 40	American	386.0	52.0	18.0	Baltimore, Md.	Tacoma, Wash.	General	2,167	7,209	5,172
New Orleans	2	23 25	3	6 10	3	13 27	3	17 09	American	395.5	55.0	21.4	New York, N. Y.	Melbourne, Aus/ia	General	2,167	7,209	5,172

¹ Gunboat.

² Motor ship.

³ Ballboa for dry-docking.

⁴ Transport.

⁵ Tanker.

President Madison	3	5 20	3	6 20	3	14 21	3	22 00	American	Dollar Line	516.5	72.0	25.5	New York, N. Y.	Manila, P. I.	1,810 15, 299	10,566
California	3	4 45	3	7 05	3	15 16	3	11 14	American	Panama-Pacific Line	574.4	80.3	26.9	New York, N. Y.	San Francisco, Cal.	2,509 24, 590	17,565
Panama	3	3 05	3	7 45	3	16 30	3	16 30	British	Amer-Australian Line	479.0	62.3	28.0	New York, N. Y.	Brisbane, Australia	8,238 9, 458	4,327
Point Palmas	3	10 35	3	10 45	3	17 40	3	18 40	American	Swayne & Hoyt	386.0	52.0	21.8	Houston, Texas	Seattle, Wash.	5,059 5, 708	4,138
Pacific																	
Shipper	3	11 05	3	11 15	3	17 59	3	23 55	British	Furness, Withy & Co.	420.0	58.0	17.0	Manchester, Eng.	Vancouver, B. C.	633 7, 892	5,858
Aonesquia	3	5 30	3	11 30	3	19 02	3	19 58	Chilean	Cia. Sud. Amer. de Vap.	422.8	56.2	24.2	New York, N. Y.	Valparaiso, Chile	1,109 7, 764	4,705
Matacana	3	21 25	4	6 10	4	13 34	4	16 00	British	Shaw, Savill & Albion	477.0	63.0	26.8	N. Plymouth, N. Z.	N. Plymouth, N. Z.	5,200 11, 216	7,884
Carigo	25	22 10	4	9 00	4	16 36	4	17 50	German	Hamburg-American Line	227.2	34.4	13.0	Cristobal, C. Z.	Guayacmil, Ecuador	223 1, 572	1,011
Santa Elisa	3	18 20	4	9 27	4	15 50	4	21 41	American	Grace Line	405.0	52.0	22.0	New York, N. Y.	Valparaiso, Chile	1,697 5, 957	4,825
Columbian	4	11 25	4	11 35	4	17 52	4	19 10	American	Amer-Hawaiian Line	360.2	54.0	18.0	Boston, Mass.	Portland, Ore.	2,137 6, 760	4,450
Fairfield	4	13 15	4	13 40	4	20 19	5	1 30	American	Issthmian S. S. Lines	309.0	48.0	20.8	Mobile, Ala.	San Francisco, Cal.	4,345 3, 393	2,119
California	4	8 00	4	13 40	4	22 16	4	22 16	Italian	Nav. Libera Triesteina	523.0	64.0	22.0	Genoa, Italy	Vancouver, B. C.	653 13, 787	9,856
Losmar	4	15 20	4	15 30	4	22 35	4	23 56	American	Calmar Line	409.0	54.0	22.0	Baltimore, Md	Seattle, Wash.	4,000 6, 531	4,795

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Texas	27	15 05	28	6 21	28	13 30	28	13 30	American	The Texas Co.	416.8	56.1	27.0	Los Angeles, Calif.	New York, N. Y.	8,451 6, 782	4,830
Tidewater	27	19 10	28	6 54	28	14 05	28	14 05	American	Tidewater Oil Co.	480.6	66.0	28.2	Los Angeles, Calif.	New York, N. Y.	13,971 9, 742	6,373
Pierce	28	4 52	28	7 15	28	15 00	28	22 35	American	Dollar Line	517.0	72.2	29.0	Manila, P. I.	New York, N. Y.	7,119 15, 234	10,511
S-10	28	13 35	28	14 18	28	21 35	29	1 00	Norwegian	U. S. Navy	377.6	54.0	25.0	Balboa, C. Z.	Cristobal, C. Z.	7,156 6, 108	4,358
Santa Inez	28	13 50	29	6 11	29	12 55	29	20 05	American	Grace Line	370.0	53.2	19.0	Valparaiso, Chile	New York, N. Y.	2,674 6, 255	4,016
Charles R.																	
McCorrick	28	23 30	29	7 08	29	15 20	29	15 20	American	Munson, McCork'K Line	401.4	53.2	26.0	Seattle, Wash.	Baltimore, Md.	7,765 7, 082	5,167
Iowan	29	10 15	29	10 46	29	17 25	29	20 25	American	Amer-Hawaiian Line	407.7	53.7	25.0	Portland, Ore.	Boston, Mass.	5,304 7, 979	5,028
Montrolite	29	10 15	29	11 16	29	19 05	29	19 05	British	Imperial Oil Co., Ltd.	510.9	68.2	30.0	Cabo Blanca, Peru	Montreal, Canada	15,673 11, 555	6,753
Sjerenborg	29	14 30	29	15 14	29	22 10	29	22 10	Danish	Can. Amer. Ship. Co.	380.0	53.9	26.0	Vancouver, B. C.	London, England	7,283 6, 219	4,691
Virginia	29	11 30	30	6 15	30	13 50	30	14 25	American	Panama-Pacific Line	586.4	80.3	31.0	San Francisco, Cal.	New York, N. Y.	6,691 25, 254	18,170
Odenwald	29	18 35	30	7 30	30	16 15	30	19 20	German	Hamburg-American Line	399.5	54.3	26.0	Valparaiso, Chile	Hamburg, Germany	8,169 6, 808	4,979
Livingston Roc	29	9 00	30	9 30	30	17 05	30	17 15	American	Shell Oil Co.	462.4	60.2	28.0	Los Angeles, Calif.	New York, N. Y.	10,585 8, 991	6,965
Susan V.																	
Luckenbach	30	9 45	30	10 30	30	17 45	30	17 45	American	Luckenbach Line	484.3	57.7	25.0	Portland, Ore.	Boston, Mass.	7,210 7, 947	5,688
Australia	30	12 45	30	13 30	30	20 50	30	22 50	American	The Texas Co.	509.7	70.3	31.0	Los Angeles, Calif.	New York, N. Y.	16,865 12, 514	8,427
Canadian	30	15 45	30	16 46	30	14 05	30	14 05	Danish	East Asiatic Co.	470.3	63.7	31.0	Vancouver, B. C.	Newcastle, England	12,700 11, 157	8,336
Panator	30	15 45	30	16 46	30	14 05	30	14 05	British	Can. Nat. Steamships	400.3	52.4	23.0	Vancouver, B. C.	Montreal, Canada	6,206 5, 858	4,108
Somme	30	10 15	30	11 22	30	13 00	30	18 05	American	U. S. Army	448.0	58.0	26.0	San Francisco, Cal.	Brooklyn, N. Y.	151	
Oliphenter	30	22 00	30	6 39	30	16 25	30	17 23	British	British Oil Shipping Co	410.0	53.5	25.0	Los Angeles, Calif.	Have, France	7,786 6, 010	4,094
Salvador	30	18 50	30	7 10	30	17 40	30	18 40	British	Pacific Steam Nav. Co.	245.0	33.5	13.4	Champeron, Guat.	Cristobal, C. Z.	271 1, 270	735
Pacific Grove	30	8 15	30	9 08	30	17 00	30	18 00	British	Furness, Withy & Co.	450.4	60.8	28.0	Vancouver, B. C.	London, England	9,132 10, 086	7,226
Junior E.	29		29		29		29			H. B. Mailton	385.0	51.0	25.0	Balboa, C. Z.	Batun, C. Z.	3	1
Ohio Maru	1	17 30	1	18 03	2	11 35	2	13 15	Japanese	Kokusai Kisen Kaisha	385.0	51.0	25.0	Itoilo, P. I.	Gatun, C. Z.	7,206 5, 928	4,381
Svealand	1	17 30	1	18 41	2	13 05	2	13 05	Swedish	Ore S. S. Corp.	561.1	72.2	35.0	Cruz Grande, Chile	New York, N. Y.	22,146 15, 424	4,421
Chickasaw																	
City	1	17 50	2	5 57	2	13 50	2	13 50	American	Issthmian S. S. Lines	395.5	56.0	27.0	Vancouver, B. C.	Avonmouth, Eng.	7,824 7, 321	5,237
Gracia	1	23 10	2	6 45	2	14 15	2	14 15	British	Donaldson Brothers	415.5	54.2	27.0	Vancouver, B. C.	Glasgow, Scotland	6,420 6, 809	4,842
Floamar	2	2 38	2	7 24	2	15 15	2	15 15	American	Calmar S. S. Corp.	410.0	54.2	25.4	Seattle, Wash.	Baltimore, Md.	7,746 6, 604	4,655

* Gasoline and kerosene.

† Submarine.

‡ Launched.

§ Motor ship.

¶ Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Net.
Eleanor Christenson.	2	5.55	2	8.11	2	16.25	2	16.25	American.	Arrow Line.	410.5	54.3	25.0	Portland, Ore.	Baltimore, Md.	Lumber.	6,931	6,572	4,788
Chattanooga	2	8.30	2	9.28	2	17.50	3	1.15	American.	Isthmian S. S. Lines.	424.2	56.2	26.2	Shanghai, China.	Baltimore, Md.	Sugar, general.	7,666	7,611	5,450
Barat	2	13.30	2	13.55	2	20.45	3	13.20	Dutch.	Royal Neth. S. S. Co.	202.9	33.1	13.5	Buenaventura, Col.	Cristobal, C. Z.	Coffee, general.	742	1,182	742
Scottish	1	22.56	3	6.21	3	16.00	3	16.00	British.	Anglo-Saxon Pet. Co.	442.0	57.0	27.0	Los Angeles, Calif.	Lands End, Eng.	Gasoline.	8,215	7,579	4,892
Heather	1	22.57	3	6.38	3	14.55	4	00.55	French.	French Line.	495.0	58.3	27.0	Vancouver, B. C.	La Havre, France.	General.	6,580	10,619	7,592
Winnipeg	3	2.00	3	7.16	3	15.40	4	00.30	German.	Hamburg-American Line	461.5	61.1	26.0	Vancouver, B. C.	Hamburg, Germany	General.	6,796	9,267	6,834
Seattle	3	2.30	3	8.20	3	16.30	3	16.30	American.	Amer.-Hawaiian Line.	471.1	60.0	25.0	Seattle, Wash.	Boston, Mass.	General.	7,383	9,082	6,838
Nebraska	3	2.30	3	8.20	3	16.30	3	16.30	American.	Amer.-Hawaiian Line.	471.1	60.0	25.0	Seattle, Wash.	Boston, Mass.	General.	7,383	9,082	6,838
Oridono Maru.	2	23.43	3	8.53	3	17.00	3	17.00	Japanese.	Tatsumi S. S. Co.	400.0	54.5	26.0	Manila, P. I.	Atl. coast, U. S. A.	Sugar.	7,300	.....	.....
Steel Age.	3	7.00	3	9.12	3	18.10	3	20.10	American.	Norton, Lilly & Co.	395.5	55.0	27.0	Port Allen, T. H.	New York, N. Y.	Sugar.	8,750	7,330	5,245
Manizales.	3	9.15	3	10.05	3	18.16	3	20.00	German.	Roland Line.	216.5	32.9	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	587	1,132	741
New York	3	11.40	3	12.28	3	20.00	3	20.10	American.	The Texas Co.	416.8	56.1	27.0	Los Angeles, Calif.	Providence, R. I.	Gasoline.	8,478	6,775	4,841
City of San Francisco	3	14.30	4	6.18	4	12.50	5	16.55	American.	Panama Mail S. S. Co.	296.1	45.9	16.0	San Francisco, Cal.	Puerto Colombia.	General.	563	3,848	2,606
Spencer	3	21.10	4	6.49	4	14.05	4	14.05	American.	N. Y. & Phila. S. S. Co.	391.8	51.3	24.0	Manila, P. I.	New York, N. Y.	Coconut oil.	6,785	5,601	3,902
Kellogg	3	21.10	4	6.49	4	14.05	4	14.05	American.	N. Y. & Phila. S. S. Co.	391.8	51.3	24.0	Manila, P. I.	New York, N. Y.	Coconut oil.	6,785	5,601	3,902
Caragan	3	21.50	4	7.25	4	15.20	4	20.50	British.	Can. Nat. Steamships	400.0	52.4	17.0	Brisbane, Australia	Montreal, Canada.	General.	2,535	5,914	4,195
Commander.	2	22.10	4	7.26	4	16.50	4	16.50	Colombian.	Norwegian Navigation Co.	116.0	21.1	8.0	Buenaventura, Col.	Cristobal, C. Z.	General.	216	211	124
Caldas	4	12.25	4	13.03	4	19.55	4	22.50	Norwegian.	Norwegian S. Corp.	415.0	54.9	26.0	Vancouver, B. C.	Rotterdam, Holland	Lumber, general.	7,068	6,853	5,246
Briminger	4	13.10	4	13.53	4	21.15	4	21.15	Danish.	East Asiatic Co.	425.2	55.3	30.0	Vancouver, B. C.	Copenhagen, Den.	Lumber, general.	10,265	7,396	5,688
Asia	4	14.50	4	15.38	4	22.30	4	22.30	Colombian.	United Fruit Co.	107.4	22.9	11.4	Buenaventura, Col.	Cristobal, C. Z.	Coffee.	277	262	161

¹ Tanker. ¹⁰ Motor ship. ¹¹ For orders.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Date.	Vessel.	ARRIVALS.		Date.	Vessel.	DEPARTURES.	
		From—	Line.			Line.	For—
June 28	Viking ¹²	George F. Baker, jr.	Line.	June 28	Tautonia	Hamburg-American Line.	Cartagena, Colombia.
June 29	Simon Bolivar.	Royal Netherlands S. S. Co.	Line.	June 28	No. 9688 ¹³	Pan American Airways.	San Salvador via waypoints.
June 30	Metapan.	United Fruit Co.	Line.	June 28	No. 300-N ¹³	Pan American-Grace Airways	Pimental via waypoints.
June 30	No. 300-N ¹³ .	Pan American-Grace Airways	Line.	June 28	No. 069-M ¹³	Pan American Airways.	Miami via waypoints.

¹² Yacht. ¹³ Air mail carrier.

* Other than ships, passing through the Canal.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.			* DEPARTURES.		
Date.	Vessel.	Line.	Date.	Vessel.	Line.
June 30.....	Inapaquina ¹⁴	A. Tagaropoulos	June 29.....	Viking ¹⁴	George F. Baker, jr.
July 1.....	Cristobal	Panama R. R. S. S. Line	June 30.....	Inapaquina ¹⁴	A. Tagaropoulos
July 1.....	Sixaola	United Fruit Co.	June 30.....	Simon Bolivar	Royal Netherlands S. S. Co.
July 1.....	Tela	United Fruit Co.	July 1.....	No. 967-M ¹⁵	Pan American Airways
July 1.....	No. 945-M ¹⁵	Pan American-Grace Airways	July 1.....	Metapan	Pan American Airways
July 1.....	Galeita	Hamburg-American Line	July 1.....	Tela	United Fruit Co.
July 1.....	No. 9664 ¹⁵	Pan American Airways	July 2.....	Sixaola	United Fruit Co.
July 1.....	No. 9667-M ¹⁵	Pan American Airways	July 2.....	Galeita	Hamburg-American Line
July 2.....	Simon Bolivar	Royal Netherlands S. S. Co.	July 2.....	No. 144-M ¹⁵	Pan American-Grace Airways
July 2.....	Carmelita ¹⁶	Standard Fruit & S. S. Co.	July 2.....	Carmelita ¹⁶	Standard Fruit & S. S. Co.
July 3.....	Atlantida	Standard Fruit & S. S. Co.	July 3.....	Arguani	Elders & Fyfes Line
July 3.....	Ulua	United Fruit Co.	July 3.....	Ulua	United Fruit Co.
July 3.....	Arguani	Elders & Fyfes Line	July 4.....	Atlantida	Standard Fruit & S. S. Co.
July 3.....	Bogota	Colombian S. S. Line	July 4.....	Bogota	Colombian S. S. Line
July 4.....	Tela	United Fruit Co.	July 4.....	Tela	United Fruit Co.
July 4.....	Swiftscout	C. D. Mallory & Co.	July 4.....	Simon Bolivar	Royal Netherlands S. S. Co.
July 4.....	No. 144-M ¹⁵	Pan American-Grace Airways	July 4.....	Annetta I. ¹⁴	P. W. Hamilton
July 4.....	No. 698-M ¹⁵	Pan American Airways			
July 4.....	Annetta I. ¹⁴	P. W. Hamilton			

¹⁴ Motor boat. ¹⁵ Air mail carrier. ¹⁶ Motor schooner.

PORT OF BALBOA.		
Date.	Vessel.	Line.
July 2.....	San Jose	United Fruit Co.
July 3.....	Real ¹⁷	Hans Elliott
July 3.....	A. B. Obarrío ¹⁷	A. Valdez
July 3.....	Des Hermanos ¹⁷	A. Valdez
July 3.....	Nueva Panama ¹⁸	Hans Elliott

* Other than ships passing through the Canal.

San Francisco, Calif.
Panama Bay, R. P.
Panama Bay, R. P.
Panama Bay, R. P.
Panama Bay, R. P.

United Fruit Co.
Hans Elliott.
A. Valdez
A. Valdez
Hans Elliott.

San Jose.....
Real ¹⁷
A. B. Obarrío ¹⁷
Des Hermanos ¹⁷
Nueva Panama ¹⁸

San Francisco, Calif.
Panama Bay, R. P.
Panama Bay, R. P.
Panama Bay, R. P.
Panama Bay, R. P.

¹⁷ Motor schooner. ¹⁸ Motor ship.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending July 4, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Orazio	Italian S. S. Line		June 28		41
Teutonia	Hamburg-American Line		June 28		439
President Pierce	Dollar Line	June 28	June 28	452	1
Creole Jefe	Creole Petroleum Co.	June 28	June 29	2,820	(?)
Wido	North German Lloyd	June 28	June 29	172	11
Santa Inez	Grace Line	June 29	June 29	164	112
Simon Bolivar	Royal Netherlands S. S. Co.	June 29	June 30	57	1 ¹ / ₂
Kwanto Mam	Osaka Shosen Kaisha	June 29	June 30	(?)	1
Nebraska	Royal Mail Steam Packet Co.	June 29	June 30	276	21
Odenwald	Hamburg-American Line	June 30	June 30	94	(?)
Metapan	United Fruit Co.	June 30	July 1	37	226
Villanger	Westfal, Larsen & Co.	June 30	July 1	(?)	85
Cristobal	Panama R. R. S. S. Line	July 1		2,563	
San Julian	States S. S. Line	July 1	July 1	112	22
Salvador	Pacific Steam Navigation Co.	July 1		271	
Oregon	French Line	July 1	July 2	242	129
Tela	United Fruit Co.	July 1	July 2	1,048	94
Galicia	Hamburg-American Line	July 1	July 2	24	72
Taranger	Westfal, Larsen & Co.	July 1	July 2	(?)	116
Sixaola	United Fruit Co.	July 1	July 2	395	391
Simon Bolivar	Royal Netherlands S. S. Co.	July 2	July 4	3 ¹ / ₂	570
Baralt	Royal Netherlands S. S. Co.	July 2		738	
Ulna	United Fruit Co.	July 3	July 3	213	32
Winnipeg	French Line	July 3	July 3	139	128
Manizales	North German Lloyd	July 3		587	
Seattle	Hamburg-American Line	July 3	July 3	31	183
Santa Elisa	Grace Line	July 3	July 4	133	108
Bogota	Colombian S. S. Line	July 3	July 4	68	299
Atlantida	Standard Fruit and S. S. Co.	July 3	July 4	178	11
Cerigo	Hamburg-American Line		July 4		223
Ecuador	Panama Mail S. S. Co.	July 4		304	
Swiftscout	C. D. Mallory & Co.	July 4		11,725	
City of San Francisco	Panama Mail S. S. Co.	July 4		658	
Abraham Lincoln	Fred Olsen & Co.	July 4		328	
Margaret Johnson	Johnson S. S. Line	July 4		129	
Tela	United Fruit Co.	July 4	July 4	9 ¹ / ₂	208
California	Navigazione Libera-Triestina	July 4	July 4	84	(?)
Caldas	National Navigation Co.	July 4		216	
Cauca	National Navigation Co.	July 4		305	
Reina del Pacifico	Pacific Steam Navigation Co.	July 4		175	
Canadian Commander	Canadian National Steamships	July 4	July 4	107	(?)

* No cargo discharged.

* No cargo laded.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices, including the 25 per cent surcharge, to individuals and companies, effective July 7, 1931.

Commodities.	Unit.	Price.
Brass, bar, average	Lb.	\$0.24
Brass, sheet, average	Lb.	.24
Bronze, Tobin, average	Lb.	.24
Gasoline, motor grade	Gal.	.105
Metal, yellow	Lb.	.23
Oakum, Navy, spun	Lb.	.16
Oakum, Navy, unspun	Lb.	.15
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder	Gal.	.28
Oil, burning, Colza	Gal.	1.06
Oil, engine, gas, in drums, Gulfrifon Med. No. 2135	Gal.	.33
Oil, engine, gas, extra heavy, in cases, Gulfrifon No. 2250	Gal.	.45
Oil, engine, gas, extra heavy, in drums, Gulfrifon, No. 2250	Gal.	.39
Oil, kerosene, in drums	Gal.	.07
Oil, marine engine	Gal.	.49
Paint, lead, white, dry	Lb.	.14
Paint, lead, white, in oil	Lb.	.11
Paint, zinc oxide, dry	Lb.	.10
Paint, zinc oxide, in oil	Lb.	.11
Grease, gear, chain and wire rope, lubricating	Lb.	.05
Grease, yellow, cup, No. 3	Lb.	.08
Grease, yellow, cup, No. 5	Lb.	.09
Soda, ash	Lb.	.03
Waste, cotton, colored	Lb.	.13
Waste, cotton, white	Lb.	.15

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Cargo Through the Canal During June, 1931.

On pages 704 and 705 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in June, 1931. This cargo, segregated according to direction as compared with June, 1930, and the differences, are shown in the following tabulation:

	June, 1930.	June, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific	699,652	472,778	-226,874
Pacific to Atlantic	1,447,529	1,286,198	-161,331
Total	2,147,181	1,758,976	-388,205

It will be noted from the above that the Atlantic to Pacific tonnage decreased 226,874 tons (32.4 per cent) in comparison with June, 1930, and that from the Pacific to the Atlantic decreased 161,331 tons (11.2 per cent), making a total decrease of cargo tonnage in both directions of 388,205 tons (18.1 per cent). The heavy decrease in the movement from the Atlantic to the Pacific (as has been true for several months), has been caused by a curtailment in the shipment of almost all commodities normally routed in this direction. In the movement from the Pacific to the Atlantic several important gains were made last month—mostly in food products—but the increases were all absorbed by heavy decreases in the shipments of mineral oils and ores. The total cargo tonnage passing through the Canal during the past month was the lowest since February, 1923, when 1,563,278 tons were carried through.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Seventy (70) per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States and 20.6 per cent in Europe, these two areas contributing over 90 per cent of the total cargo moving in this direction in June, 1931. In comparison with June, 1930, tonnage from the United States declined 126,539 tons (27.7 per cent), while that from Europe decreased 79,431 tons (44.9 per cent). The percentage of the total originating in the United States was higher in the past month than in June, 1930, while the proportion of the total coming from Europe was lower.

Destination.—Forty-seven and eight-tenths (47.8) per cent of the Pacific-bound cargo was destined to the United States; 21.5 per cent to Asia; 9.4 per cent to South America; and 7.9 per cent to Australasia. Tonnage to all these areas decreased in comparison with June, 1930, as follows: To the United States, 79,278 tons (26.0 per cent); to Asia, 26,647 tons (20.8 per cent); to South America, 55,799 tons (55.7 per cent); and to Australasia, 62,855 tons (62.8 per cent). The proportion of the total cargo destined to the United States and Asia showed increases over June, 1930, while the proportionate amounts destined to South America and Australasia decreased in comparison with the corresponding month last year.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 46.5 per cent came from the United States; 21.0 per cent from South America; 19.7 per cent from Canada; 7.6 per cent from Asia; and 4.7 per cent from Australasia. Cargo from Canada showed a proportionate as well as an actual increase in tonnage in comparison with June, 1930, as did that originating in Asia. The actual increase in tonnage from Canada amounted to 76,000 tons (42.8 per cent), and that from Asia, 30,568 tons (45.1 per cent). Cargo tonnage from the other before-mentioned regions decreased in relation to the total cargo as well as in actual tonnage in comparison with June, 1930. The decreases were as follows: From the United States, 156,543 tons (20.7 per cent); from South America, 76,163 tons (22.0 per cent); and from Australasia, 19,386 tons (24.5 per cent). Larger wheat shipments from Canada contributed to the increased tonnage from that area, while from Asia the rice and soya bean shipments were higher.

Reduced mineral oil shipments was the principal cause of the decreased tonnage from the west coast of the United States, while from South America the curtailed ore tonnage contributed largely to the shrinkage of cargo tonnage from that area.

Destination.—Segregated according to destination, 51.0 per cent of the total cargo moving from the Pacific to the Atlantic went to the United States, and 41.6 per cent to Europe, these two areas absorbing 92.6 per cent of the cargo tonnage moving in this direction. Tonnage to the United States decreased 226,700 tons (25.7 per cent), while that to Europe increased 85,977 tons (19.2 per cent). In their relations to the total cargo, tonnage to the United States was considerably lower in June, 1931, than in June, 1930, while that to Europe was considerably higher in June, 1931. Smaller mineral oil and ore shipments contributed largely to the decline in the former instance, while larger wheat shipments was the leading cause of the increased tonnage to Europe.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify approximately 90 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific during the month of June, 1931. The remaining 10 per cent consisted, for the most part, of manufactured goods in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for June, 1930, or June, 1931, are listed in the following tabulation:

Commodity.	June, 1930.	June, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Automobiles.....	12,533	6,715	-5,818
Cement.....	24,487	15,247	-9,240
Coal and coke.....	23,892	7,218	-16,674
Cotton.....	8,885	14,250	+5,365
Manufactured goods:			
Iron and steel.....	146,205	93,410	-52,795
Machinery.....	13,807	7,293	-6,514
Railroad material.....	15,016	5,583	-9,433
Tinplate.....	28,599	25,155	-3,444
Miscellaneous.....	21,874	25,918	+4,044
Metal scrap.....	12,841	758	-12,083
Oils, mineral.....	57,318	32,254	-25,064
Paper.....	16,525	16,225	-300
Phosphates.....	35,866	22,631	-13,235
Sugar.....	15,728	11,389	-4,339
Sulphur.....	18,053	17,778	-275
Tobacco.....	7,490	16,858	+9,368

The above 16 commodity groups for June, 1931, comprise 67.4 per cent of the total cargo moving from the Atlantic to the Pacific. Three of the items—cotton, miscellaneous manufactured goods, and tobacco, showed increases, while the others registered losses.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

From the cargo declarations submitted it was possible to classify approximately 99 per cent of the cargo moving from the Pacific to the Atlantic during June, 1931. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1930, are listed below:

Commodity.	June, 1930.	June, 1931.	Difference.
	Long tons.	Long tons.	
Barley	21,742	17,921	-3,821
Beans	5,951	21,565	+15,614
Canned goods (fish, fruit, vegetables, etc.)	33,328	56,939	+23,611
Coffee	12,166	12,691	+525
Cold storage (food products) *	20,697	34,852	+14,155
Fruit, dried.	12,783	15,708	+2,925
Fruit, fresh.	10,217	19,863	+9,646
Lumber	250,235	220,287	-29,948
Metals, various	50,993	39,653	-11,340
Nitrates	44,847	47,591	+2,744
Oats	1,664	19,603	+17,939
Oils, mineral	425,710	263,093	-162,617
Ores (principally iron)	208,440	78,573	-129,867
Rice	1,390	12,293	+10,903
Sugar	77,752	76,784	-968
Wheat	114,888	195,947	+81,059
Wool	13,708	20,004	+6,296

* Does not include fresh fruit.

The above 17 commodity groups for June, 1931, comprise 89.7 per cent of the cargo moving from the Pacific to the Atlantic. Eleven of the items show increases, and 6 decreases. The more important increases were in food products. Heavy decreases were registered in the shipments of mineral oils and ores.

(Continued on next page.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending July 11, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Santa Clara	Grace Line	June 26	June 26	203	
President Adams	Dollar Line	June 26	June 26		1
Acajutla	Pacific Steam Navigation Co.	June 27	June 27		3
Santa Inez	Grace Line	June 28	June 29	1	
Cambrai	U. S. Government	June 28	June 30	17	6
Somme	U. S. Government	June 30	July 1	167	39
San Jose	United Fruit Co.	July 2	July 2	280	51
President Madison	Dollar Line	July 3	July 3	24	
California	Panama Pacific Line	July 3	July 3		167
City of San Francisco	Panama Mail S. S. Co.	July 3	July 4	133	
Santa Elisa	Grace Line	July 4	July 4	76	
Nora	Union Oil Co.	July 4	July 5	5,473	
Abraham Lincoln	Fred Olsen & Co.	July 5	July 6	1,452	2
American Star	Nelson Line	July 6	July 7	227	
Ecuador	Panama Mail S. S. Co.	July 6	July 6	33	2
Santa Barbara	Grace Line	July 6	July 6	9	2
Guatemala	Panama Mail S. S. Co.	July 6	July 7	130	24
Solna	Anglo-Saxon Petroleum Co.	July 7	July 8	7,290	
Trocas	Shell Oil Co.	July 7	July 9	8,937	
Saramacca	United Fruit Co.	July 9	July 9	231	
Santa Maria	Grace Line	July 10	July 10	132	5
City of Elwood	Roosevelt S. S. Co.	July 11	July 12	528	
Rakuyo Maru	Nippon Yusen Kaisha	July 11	July 12	104	

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, July 11, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Abraham Lincoln ²	4	15	5	6	5	12	6	17	Norwegian.	Fred Olsen Line.	435.0	56.0	19.11	Olo, Norway.	Vancouver, B. C.	Steel, general.	3,207	8,065	5,953
Wichita ²	4	21	5	6	5	13	5	14	American.	Roosevelt S. S. Co., S. B.	395.0	55.0	24.0	New York, N. Y.	Shanghai, China.	General, case oil.	5,194	7,209	5,172
Reina del Pacifico ²	4	21	5	8	5	14	5	15	British.	Pacific Steam Nav. Co.	550.0	76.01	27.0	Liverpool, England	Talcahuano, Chile.	General.	2,609	18,871	13,099
Sheaf Holme ²	4	22	5	7	5	14	5	22	British.	Messrs. Wornus & Co.	407.0	54	05	Newcastle, Eng.	New Calcedonia.	Coal.	7,200	6,692	5,094
El Cervo ²	5	4	5	8	5	15	5	16	British.	Ago-Ecuador, Oilfields.	406.0	52	02	Philadelphia, Pa.	La Libertad, Ecua.	Ballast.	6,046	4,326	5,743
Toba Maru ²	5	8	5	8	5	16	5	17	Japanese.	Nippon Yusen Kaisha.	445.0	58.0	23.0	Baltimore, Md.	Kobe, Japan.	General.	5,684	8,058	5,743
Mobile City ²	5	11	5	11	5	18	5	19	American.	Ishimaru S. S. Lines.	411.0	55.0	21.0	Baltimore, Md.	Seattle, Wash.	General, steel.	4,577	7,330	5,241
Barat ²	2	20	5	13	5	20	5	22	Dutch.	Royal Neth. S. S. Co.	200.0	33.0	11.1	Cristobal, C. Z.	Guayaquil, Ecuador.	General.	167	1,183	742
Margaret ²	4	22	5	13	5	20	5	22	Swedish.	Johnson Line.	407.0	54.0	18.03	Stockholm, Sweden	San Francisco, Cal.	General.	2,025	7,048	5,337
Jonson ²	5	15	5	15	5	22	5	23	American.	Tidevator Oil Co.	419.0	56	05	New York, N. Y.	San Francisco, Cal.	General.	1,618	7,000	5,025
Solana ²	4	21	6	5	6	12	6	23	American.	Panama Mail S. S. Co.	380.0	48	07	New York, N. Y.	San Francisco, Cal.	General, coffee.	1,567	5,926	4,178
Fonduca ²	4	22	6	5	6	13	6	16	Colombian.	National Navigation Co.	107.0	23	07	Cristobal, C. Z.	Buenaventura, Col.	General.	57	202	161
Gauca ²	4	22	6	5	6	13	6	16	Japanese.	Interocean S. S. Corp.	404.0	53.0	19.0	Galveston, Tex.	Shanghai, China.	General.	2,776	5,665	4,167
Kuretake Maru ²	5	22	6	6	6	13	6	15	Japanese.	Onaka Shosen Kaisha.	461.0	62.0	20.08	Buenos Aires, Arg	Kobe, Japan.	Cotton.	1,989	10,446	7,631
Buenos Aires Maru ²	6	1	6	7	6	14	6	16	Japanese.	U. S. Navy.	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
S-10 ²			6	7	6	15	6	17	American.	U. S. Navy.	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
S-11 ²			6	7	6	15	6	17	American.	U. S. Navy.	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
S-48 ²			6	8	6	15	6	17	American.	U. S. Navy.	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
S-15 ²			6	8	6	15	6	17	American.	U. S. Navy.	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
S-16 ²			6	8	6	15	6	17	American.	U. S. Navy.	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
S-17 ²			6	8	6	15	6	17	American.	U. S. Navy.	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
San Vincente.	5	23	6	10	6	16	6	18	American.	Quaker S. S. Line.	410.0	54	03	New York, N. Y.	Balboa, C. Z.	General.	2,490	6,572	4,900
Indiana	0	10	6	10	6	17	6	18	British.	Inter. Freightling Co.	402.0	52.0	14.05	Norfolk, N. F.	Toopuila, Chile.	Ballast.	5,634	4,172	4,172
Dorin ⁴	5	8	6	13	6	21	6	23	British.	J. T. Cruikshank	186.0	25.7	10.8	St. Pierre, N. F.	Liquors	600	431	299	
Brielle.	6	00	6	13	6	21	6	23	Dutch.	Royal Neth. S. S. Co.	403.0	58.0	17.08	Hamburg, Germany	Corral, Chile.	General.	1,472	7,322	4,798
Brig.	6	00	6	13	6	21	6	23	Norwegian.	Canadian Transp. Co.	370.0	51.0	18.07	Cornbrook, N. F.	Seattle, Wash.	Newsprint paper.	2,812	5,179	3,761
Roebster ⁵	6	20	6	20	6	20	6	20	American.	U. S. Navy.	380.0	64.0	26.05	Cristobal, C. Z.	Garcin Lake, C. Z.	General.	4,467	1,007	7,698
Donau.	6	1	6	5	6	15	6	15	German.	North German Lloyd.	521.0	63.0	24.0	Antwerp, Belgium	Vancouver, B. C.	General.	2,715	5,657	4,133
Nelson	6	22	6	7	6	14	6	15	American.	Nelson Line.	380.0	53	01	New York, N. Y.	Seattle, Wash.	General.	1,733	6,291	4,630
Traveler.	7	00	7	8	7	15	7	17	Norwegian.	Fearnley & Eger	381.0	53	08	New Orleans, La.	Shanghai, China.	General.	3,282	7,156	5,094
Fernmor ²	7	00	7	8	7	15	7	17	American.	Amer-Hawaiian Line.	407.0	53	07	Boston, Mass.	Corral, Wash.	General.	1,075	7,090	4,929
Dakota.	7	16	7	16	7	22	7	23	French.	French Line.	425.0	55.0	20.2	Bordeaux, France.	Corral, Chile.	Iron, steel, gen.	3,449	6,693	4,903
Arizona.	7	13	8	6	8	13	8	14	French.	French Line.	425.0	55.0	20.2	Bordeaux, France.	Corral, Chile.	Iron, steel, gen.	3,449	6,693	4,903
Charles Christenson.	7	23	8	6	8	13	8	15	American.	Arrow Line.	409.7	54.0	15.0	Baltimore, Md.	Seattle, Wash.	General.	3,449	6,693	4,903

² Tanker. ³ Submarine. ⁴ Motor ship. ⁵ Motor schooner. ⁶ Lubricating oil and ethyl gas. ⁷ Cotton, carbon black, and rosin.

Paul	Lukenbach.	8	7.05	8	14.12	8	15.10	American.	Lukenbach Line.	471.1	59.2	20.3	Seattle, Wash.	General.	3,729	9,027	6,539
	Wind Rush.	8	7.20	8	14.35	8	15.35	American.	Shepard S. S. Co.	409.0	54.2	16.0	Seattle, Wash.	General.	3,300	6,558	4,753
	Pacific Pine.	8	8.30	8	15.56	8	16.40	American.	Dunson S. S. Corp.	410.5	54.3	16.0	Tacoma, Wash.	General.	1,736	6,583	4,808
	Steel Seater.	8	7.10	8	16.43	8	17.00	American.	Isthmian S. S. Lines	425.0	56.0	20.0	Philadelphia, Pa.	Steel, general.	8,447	7,611	5,454
	Tai Ping Yang.	8	1.40	8	12.24	8	18.45	Panamaian	Barber S. S. Line.	461.0	60.0	24.5	Manila, P. I.	General, case oil.	5,201	9,866	6,955
	Prince Rupert.	8	13.35	8	20.35	8	21.50	British.	Reardon Smith Line.	400.0	54.0	22.0	Shanghai, China.	General.	5,750	6,977	5,383
	City.	8	13.18	8	21.08	8	22.40	American.	N. O. & S. A. S. Co.	324.0	46.2	19.2	Talcahuano, Chile.	General.	1,674	3,981	2,600
	Nosa Queen.	8	19.55	9	6.15	9	14.35	British.	Amer. & Australian Line.	475.0	60.9	27.3	Talcahuano, Chile.	Sulphur, oil, gen.	8,200	8,946	6,145
	Purri.	8	23.45	9	6.15	9	13.35	Japanese.	Kokusai Kaisha.	425.0	53.8	28.11	Sydney, Australia.	Wheat, cotton.	8,901	6,899	5,139
	Tamaho Maru.	9	4.00	9	7.25	9	15.44	British.	Imperial Oil Co.	521.5	70.4	24.0	Talara, Peru.	Ballast.	12,339	7,717	
	Calgarolite	9	13.55	9	15.32	9	20.03	British.	Eagle Oil & Ship. Co.	425.0	57.0	18.0	San Luis, Calif.	Ballast.	7,115	5,010	
	Scottish	9	13.05	9	16.20	9	22.15	British.	Chilean Nitrate Prod.	421.0	55.3	14.0	Tocopilla, Chile.	Ballast.	6,367	4,324	
	Muscian	9	16.15	9	16.20	9	22.15	British.	Bank Line, Ltd.	426.0	57.0	18.0	Shanghai, China.	General.	1,800	7,923	5,412
	Vidovann	9	18.20	9	18.35	10	11.15	American.	Lukenbach Line.	425.0	57.3	25.3	Tacoma, Wash.	General.	4,283	8,568	6,648
	Edgar F.	9	12.50	10	6.00	10	13.38	American.	Grace Line.	466.0	64.0	22.8	Mare Island, Calif.	General.	2,234		
	Lukenbach.	10	5.50	10	7.15	10	14.11	American.	Dollar Line.	502.0	62.0	24.6	Talcahuano, Chile.	General.	1,555	10,626	6,680
	Harrison.	9	18.50	10	7.15	10	15.12	American.	Amer. Gulf Orient Line.	410.0	56.0	27.11	San Francisco, Cal.	General.	2,888	12,618	9,251
	Liberator.	10	4.05	10	8.30	10	15.54	American.	Isthmian S. S. Lines	424.0	56.0	18.0	Cebu, P. I.	Sulphur, pipe.	8,325	8,904	6,196
	Steel Ranger.	9	18.05	10	9.35	10	17.03	American.	United Fruit Co.	336.7	42.0	17.10	Honolulu, T. H.	Steel, general.	2,167	7,611	5,450
	Saramacca.	10	9.15	10	9.40	10	19.48	American.	Richfield Oil Co.	500.0	71.2	18.0	San Francisco, Cal.	Ballast.	3,668	3,308	
	Tamabua	3	18.15	10	14.00	10	21.05	German.	Roland Line.	216.5	32.9	12.9	Los Angeles, Calif.	Ballast.	1,967	8,542	
	Manizales	10	14.15	10	14.30	10	22.30	British.	International Pet. Co.	565.0	75.6	25.0	Guayaquil, Ecuador	General.	337	1,132	741
	C. O.	10	15.00	11	6.05	11	13.27	British.	Shaw, Savill & Albion.	477.8	61.1	29.5	Talara, Peru.	Ballast.	16,780	9,885	
	Stallman	9	19.20	11	6.00	11	13.55	American.	Panama Mail S. S. Co.	296.0	45.0	14.10	New Zealand.	General.	3,680	10,657	7,617
	City of Sun	11	1.30	11	7.10	11	17.28	American.	Amer.-Hawaiian Line.	404.0	53.9	19.0	San Francisco, Cal.	Coffee, general.	432	3,848	2,606
	Kaunua	11	4.15	11	7.20	11	15.50	British.	Can. Nat. Steamships	430.0	56.0	20.0	Portland, Ore.	General.	1,351	6,779	4,921
	Canada	11	7.40	11	8.30	11	16.38	American.	Argonaut S. S. Line.	401.0	54.0	23.0	Brisbane, Australia	General.	3,402	7,680	5,494
	Constructor	11	17.40	11	8.55	11	18.05	British.	Pacific Stearn Navv. Co.	215.0	33.5	17.0	Vancouver, B. C.	Steel, general.	5,364	6,745	4,562
	Salvador	11	6.00	11	12.30	11	18.56	German.	Hamburg-American Line	458.0	58.0	17.0	Chaparrico, Guat.	General.	820	1,070	7,855
	Rhein	11	12.35	11	14.05	11	20.58	Greek.	Chilean Nitrate Prod.	400.0	52.0	22.00	Valparaiso, Chile	General.	2,855	8,271	5,952
	Archangelos	10	12.05	11	17.15	12	13.05	American.	One S. S. Corp.	349.0	72.0	22.10	Arica, Chile	Ballast.	5,724	4,282	
	Leborne	10	12.05	11	17.15	12	13.05	American.	Standard Transp. Co.	467.6	62.7	28.1	Cruz Grande, Chile	Ballast.	14,325		

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

* Ammunition ship.

* Tanker.

Mathew	Lukenbach.	4	18.36	5	6.53	5	13.35	American.	Lukenbach Line.	434.0	57.7	21.0	Portland, Ore.	General.	4,900	7,977	5,764
	Willkno.	5	5.42	5	7.21	5	14.50	American.	Williams S. S. Corp.	415.0	55.7	26.0	Seattle, Wash.	Lumber, general.	9,880	7,750	5,805
	Blythmoor.	5	6.30	5	7.39	5	16.35	British.	W. Runciman & Co.	420.0	54.0	28.0	Vancouver, B. C.	Wheat.	9,964	6,963	5,008
	Standard	5	11.20	5	12.14	5	20.05	American.	Standard Transp. Co.	467.6	62.7	28.1	New York, N. Y.	Fuel distillate.	12,698	9,693	6,783

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross. Net.
Rochester ⁹	6	6:00	6	6:15	6	6:30	7	6:00	American.	U. S. Navy.	384.0	64.9	26.0	Balboa, C. Z.	Cristobal, C. Z.	Soya beans.	8,150	5,458
Neptunum	6	7:43	6	8:06	6	8:15	6	7:43	British.	H. A. Senter & Co.	400.3	55.3	27.0	Darien, P. I.	Copenhagen, Den.	Nitrate of soda.	7,500	5,748
Queen Maud.	6	6:30	6	6:06	6	6:30	6	6:15	British.	E. I. DuPont & Co.	400.2	52.3	25.0	Teopipila, Chile.	Wilmington, N. C.		7,500	5,748
Santa	6	5:45	6	10:36	6	17:10	7	1:20	American.	Grace Line.	480.0	64.0	24.0	Talcahuano, Chile	New York, N. Y.	General.	4,062	10,087
Daustrand	6	10:43	6	11:43	6	20:15	6	23:10	Dutch.	Holland-America Line.	509.2	64.0	20.0	Vancouver, B. C.	Rotterdam, Holland	Wheat.	9,573	11,721
Nordkap ¹⁰	6	11:25	6	12:12	6	19:05	6	20:15	Danish.	Canadian Transp. Co.	385.0	54.3	25.0	Vancouver, B. C.	Immingham, Eng.	General.	7,200	6,515
San Angelo	6	15:00	6	15:44	6	22:40	6	22:40	American.	Pac. Atlantic S. S. Co.	409.5	54.2	24.0	Grays Har., Wash.	Norfolk, Va.	General.	4,887	6,510
Guatemala	6	7:25	6	6:36	6	13:15	6	8:15	American.	Panama Mail S. S. Co.	360.2	51.6	24.0	San Francisco, Cal.	New York, N. Y.	General.	2,549	5,797
Reginoldite ¹¹	6	23:00	6	6:53	6	14:53	7	14:55	British.	Imperial Oil Co., Ltd.	469.2	63.1	30.0	Lobitos, Peru.	Halifax, N. S.	Crude oil.	11,592	9,328
Panama	6	9:59	7	7:12	7	15:00	7	15:00	American.	Amer-Hawaiian Line.	407.7	53.7	22.0	Portland, Ore.	Boston, Mass.	General.	4,315	7,907
Vinland	7	4:00	7	8:06	7	16:08	7	16:08	Norwegian.	Scand.-Nv. Pacific Line.	368.5	53.7	24.0	Corral, Chile.	Antwerp, Belgium.	General.	6,152	5,413
Point Andrea	7	7:50	7	8:43	7	16:15	7	16:15	American.	Gulf-Pac. Redwood Line	380.0	53.1	23.0	Portland, Ore.	Lake Charles, La.	Lumber, general.	4,808	5,667
Karuna	7	8:45	7	9:43	7	17:25	7	17:25	American.	Luckenbach Line.	468.3	55.1	27.0	Seattle, Wash.	Boston, Mass.	Lumber, general.	7,623	8,508
Lincolnton ¹⁰	7	9:45	7	10:48	7	18:10	7	18:10	British.	Kerr Gifford & Co.	375.0	52.6	26.0	Portland, Ore.	Dublin, Ireland.	Wheat.	7,400	6,055
Rotorua	7	5:52	7	12:20	7	19:10	7	19:10	British.	N. Z. Shipping Co.	326.3	61.4	26.0	Sava, Fil.	London, England.	Frozen, general.	5,357	12,846
American Star.	6	19:40	7	13:24	7	20:55	7	20:55	American.	Charles Nelson & Co.	386.8	52.2	24.0	Seattle, Wash.	Baltimore, Md.	Lumber, general.	6,634	5,609
Arca.	7	13:20	7	14:08	7	22:00	8	14:50	German.	North German Lloyd	331.0	46.0	20.0	San Antonio, Chile.	Bremen, Germany	Nitrate, general.	3,450	3,529
Creole Mife	7	17:06	8	11:05	8	11:05	8	11:05	Venezuelan.	West Indian Oil Co.	325.0	50.0	10.2	Balboa, C. Z.	Maracaibo, Venez.	Ballast.	8,200	3,497
Amberton	8	4:30	8	6:40	8	13:25	8	13:25	British.	R. Chapman & Sons	409.6	54.0	25.0	Vancouver, B. C.	London, England.	Wheat.	8,200	5,756
Queen City	8	13:20	8	14:12	8	21:00	8	21:00	British.	Readon Smith Line.	412.1	55.0	24.0	Vancouver, B. C.	London, England.	General.	7,004	7,925
San Anselmo.	8	13:45	8	14:39	8	22:40	8	22:40	American.	Quaker S. S. Co.	410.9	54.2	25.0	Portland, Ore.	Philadelphia, Pa.	Lumber, general.	7,104	6,755
Bennekom.	8	14:35	8	15:23	8	23:45	8	23:45	Dutch.	Royal Neth. S. S. Co.	449.7	58.2	25.0	Corral, Chile.	Hamburg, Germany	General.	8,401	7,543
Solna	7	8:30	8	17:50	9	11:15	9	13:20	Norwegian.	Anglo-Saxon Pet. Co.	399.7	52.3	12.0	Los Angeles, Calif.	Curacao, D. W. I.	Ballast.	7,980	6,252
Nordpol	8	16:40	8	17:50	9	12:45	9	13:20	American.	Ford Motor Co.	251.0	43.6	19.0	Vancouver, B. C.	British Channel	General.	2,477	2,656
Oneda.	8	14:10	9	6:28	9	13:55	9	13:55	Danish.	Canadian Transp. Co.	380.8	53.9	26.0	Vancouver, B. C.	Curacao, D. W. I.	Lumber, auto pils.	7,980	6,252
Trocas ¹⁰	7	10:15	9	6:34	9	20:25	9	20:25	British.	Shell Oil Co.	440.4	50.6	21.0	Los Angeles, Calif.	Curacao, D. W. I.	Ballast.	2,477	2,656
Rangitiki ¹⁰	8	20:50	9	10:19	9	17:20	9	17:20	British.	N. Z. Shipping Co.	550.0	70.2	27.0	Bluff, N. Z.	New York, N. Y.	Lumber, general.	5,288	18,197
Saramacca.	9	1:39	9	10:34	9	18:05	10	9:35	American.	United Fruit Co.	336.7	42.0	19.0	San Francisco, Cal.	Cristobal, C. Z.	Frozen, general.	5,221	5,068
Grobin Star.	9	12:05	9	12:40	9	20:25	10	3:10	British.	Blue Star Line, Ltd.	420.5	54.3	26.0	New Westminster, B. C.	Newcastle, Eng.	General.	9,976	7,521
Grainton	9	16:45	9	17:39	10	11:30	10	11:30	British.	Dale & Co.	423.0	50.3	26.0	Vancouver, B. C.	Hull, England.	Wheat, general.	9,710	6,823
Hofuku Maru	10	2:15	10	7:10	10	14:25	10	16:10	Japanese.	Kokusa Kisen Kaisha.	385.0	51.0	27.0	Kobe, Japan.	East coast U. S. A.	Sugar.	7,600	6,212
Sidney M.	10	1:00	10	7:18	10	14:40	10	14:40	American.	Munson, McCork & Line.	401.4	56.2	27.0	Seattle, Wash.	Baltimore, Md.	(¹²)	7,352	7,082
Hampman.	10	9:45	10	10:24	10	17:45	10	23:45	American.	N. O. & S. A. S. S. Co.	324.0	43.2	23.3	Talcahuano, Chile.	New Orleans, La.	(¹³)	4,152	3,983
Nosa Prince.	10	1:00	10	10:57	10	18:45	10	18:45	American.	Isthmian S. S. Lines.	441.1	56.0	25.0	Tacoma, Wash.	New York, N. Y.	Lumber, pulp.	7,069	7,611
Tucaloosa	10	10:15	10	11:13	10	19:35	10	19:35	American.	Standard Transp. Co.	467.6	62.7	27.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	11,300	9,699
Royal Arrow ¹¹	10	10:15	10	11:13	10	19:35	10	19:35	American.	Standard Transp. Co.	467.6	62.7	27.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	11,300	9,699

¹² Lumber and canned goods.¹³ For orders.¹⁰ Motor ship.¹¹ Cruiser.¹² Tanker.

Commercial Traffic Through the Panama Canal in June, 1931, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of June, 1931, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for June, 1930 and 1929. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States	66	370,551	277,720	449,305	278,514	\$321,184.00	165,917
Europe to Canada:							
Belgian	1	4,030	3,214	5,045	3,140	2,901.60	
British	15	82,670	58,578	95,763	58,796	64,512.56	12,596
Danish	4	26,045	19,193	32,638	20,429	20,187.79	4,339
Dutch	1	8,266	6,197	10,220	6,385	7,746.25	2,670
French	1	7,110	3,865	8,062	4,295	4,831.25	1,353
German	3	19,658	12,782	22,256	13,198	15,977.50	6,759
Italian	2	12,125	9,006	14,970	9,451	11,257.50	2,083
Norwegian	2	11,527	8,126	13,074	8,213	10,157.50	5,494
Swedish	2	10,404	6,296	10,518	7,911	7,870.00	7,406
Total	31	181,835	127,262	212,596	131,818	145,441.95	42,700
Europe to South America:							
British	5	27,677	21,044	35,774	21,853	25,477.82	11,575
Chilean	2	156	64	722	244	80.00	
Danzig	1	8,224	7,068	12,175	6,974	5,921.28	
Dutch	3	16,908	9,677	16,883	9,543	11,534.43	3,803
French	1	5,167	3,281	5,541	3,262	4,101.25	1,935
German	5	25,259	19,060	30,045	18,317	23,825.00	9,187
Italian	1	9,373	5,223	11,669	6,779	6,528.75	1,095
Norwegian	1	3,925	3,118	5,113	3,125	3,897.50	4,283
Yugoslav	2	9,948	7,158	11,748	7,122	7,162.56	
Total	21	106,637	75,693	129,670	77,219	88,528.59	31,878
United States to Far East:							
British	6	34,368	21,939	37,758	22,406	27,423.75	22,506
Japanese	7	37,950	31,352	47,482	31,039	39,022.50	30,112
Norwegian	3	16,588	8,855	15,893	9,083	11,106.25	16,381
United States	3	21,429	16,284	26,863	16,237	20,355.00	19,108
Total	19	110,335	78,460	127,996	78,765	97,907.50	88,107
United States to South America:							
British	4	13,958	11,323	18,114	11,276	11,514.12	1,200
Chilean	1	4,672	3,433	7,310	3,976	4,291.25	1,111
Swedish	2	8,917	7,486	30,676	8,762	6,420.24	
United States	7	31,244	22,864	41,373	22,808	26,297.00	8,781
Total	14	58,791	45,106	97,473	46,822	48,522.61	11,092
Cristobal to South America:							
Colombian	4	570	550	880	550	668.90	475
Dutch	1	742	294	780	323	367.50	54
German	4	3,491	2,260	4,347	2,334	2,825.00	1,166
Total	9	4,803	3,104	6,007	3,207	3,861.40	1,695
Europe to United States:							
German	1	6,344	3,826	6,780	4,057	4,782.50	2,775
Japanese	1	4,746	4,387	4,726	2,701	3,417.12	
Norwegian	2	9,040	6,469	10,752	6,430	6,508.80	
Swedish	1	6,098	3,302	5,819	4,061	4,127.50	
United States	1	8,619	7,026	11,247	6,954	6,205.68	
Total	6	34,847	25,010	39,324	24,203	25,041.60	2,775
Europe to Australasia:							
British	5	48,828	33,125	57,297	34,777	41,406.25	18,853
French	1	3,772	3,087	4,517	2,728	3,858.75	2,762
Total	6	52,600	36,212	61,814	37,505	45,265.00	21,615

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States to Canada:							
Norwegian.....	1	4,561	2,923	4,904	2,939	\$3,653.75	6,935
United States.....	3	16,270	13,500	20,010	13,486	16,647.95	12,684
Total.....	4	20,831	16,423	24,914	16,425	20,301.70	19,619
United States to Philippine Islands:							
British.....	1	6,145	3,490	6,734	3,656	4,362.50	3,043
Danish.....	1	4,066	3,142	5,177	3,199	3,927.50	3,465
United States.....	2	11,761	9,305	13,359	8,393	11,631.25	13,925
Total.....	4	21,972	15,937	25,300	15,248	19,921.25	20,433
United States to Australasia:							
British.....	4	19,725	13,095	21,405	13,423	16,080.99	11,415
Cristobal to Central America:							
British.....	2	1,441	1,286	2,298	1,304	1,607.50	1,794
Panamanian.....	1	22	24	45	29	26.40	46
Total.....	3	1,463	1,310	2,343	1,333	1,633.90	1,840
Around the world:							
United States.....	3	28,930	21,052	35,144	21,052	26,315.00	6,830
Cristobal to United States:							
United States.....	2	4,402	4,014	6,907	4,102	3,169.44	.....
Canada to South America:							
British.....	2	14,470	12,491	23,250	12,051	10,418.40	.....
West Indies to Canada:							
British.....	2	6,706	4,490	7,485	4,486	5,612.50	11,573
Cristobal to Balboa:							
United States.....	2	161	173	98	67	145.50	.....
Foreign vessels without cargo—United States intercoastal:							
Danish.....	1	5,064	2,750	4,732	2,865	3,437.50	.....
United States to Hawaii:							
United States.....	1	5,249	3,847	6,188	3,822	4,808.75	5,489
Canada to United States:							
Norwegian.....	1	4,757	2,850	4,791	2,864	3,562.50	4,765
Canadian intercoastal:							
British.....	1	4,073	3,258	5,482	3,375	4,072.50	5,310
Canada to Australasia:							
British.....	1	4,491	3,294	5,458	3,352	4,117.50	4,201
Central America to Canada:							
British.....	1	58	47	70	47	41.76	.....
South America to United States:							
United States.....	1	2,603	1,351	2,435	1,351	1,688.75	897
South America to Canada:							
United States.....	1	4,989	3,517	5,550	3,517	4,396.25	3,097
South America to Far East:							
Japanese.....	1	7,354	5,958	9,455	5,902	7,447.50	5,887
West Indies to United States:							
United States.....	1	4,969	3,547	5,688	3,561	4,433.73	4,132
Europe to Central America:							
German.....	1	3,467	2,213	3,979	2,280	2,766.25	1,511
Egypt to South America:							
British.....	1	5,140	3,640	5,840	3,624	3,700.80	.....
Grand total, June, 1931.....	210	1,091,273	793,824	1,330,699	802,800	923,775.14	472,778
Grand total, June, 1930.....	259	1,291,603	980,994	1,633,780	992,514	1,099,764.87	699,652
Grand total, June, 1929.....	272	1,287,393	977,989	1,604,457	981,038	1,117,940.01	899,386

* Includes barge having no registered tonnage.

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	63	347,557	266,953	432,567	267,579	\$333,691.25	473,115
Canada to Europe:							
Belgian.....	1	3,965	3,163	4,983	3,643	3,953.75	7,176
British.....	23	111,065	80,488	130,181	80,664	100,610.00	186,203
Danish.....	2	13,027	10,328	14,081	8,803	12,910.00	19,993
Dutch.....	1	6,060	4,860	7,651	4,796	6,075.00	9,633
French.....	1	7,027	3,873	8,061	4,295	4,841.25	7,253
German.....	3	20,295	13,360	22,941	13,928	16,700.00	26,231
Italian.....	1	5,806	4,401	7,549	4,720	5,501.25	8,011
Norwegian.....	4	19,515	12,077	20,177	12,308	15,096.25	29,765
Swedish.....	1	5,661	3,406	5,652	4,320	4,257.50	7,627
Total.....	37	192,421	135,956	221,276	137,477	169,945.00	301,892

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
South America to Europe:							
Belgian.....	1	4,792	4,142	6,511	4,172	\$5,177.50	8,100
British.....	5	23,420	21,559	36,359	22,359	26,948.75	33,079
Danzig.....	1	8,224	7,068	12,175	6,974	8,835.00	15,799
Dutch.....	2	9,100	5,121	8,763	5,328	6,401.25	12,727
French.....	1	4,834	3,223	5,390	3,219	4,028.75	8,285
German.....	6	29,974	20,246	32,564	19,872	25,307.50	39,927
Italian.....	1	9,329	5,176	11,718	6,750	6,470.00	1,590
Norwegian.....	1	3,797	3,039	5,041	3,101	3,798.75	6,254
Total.....	18	98,470	69,574	118,521	71,775	86,967.50	125,761
South America to United States:							
British.....	1	4,326	3,707	5,841	3,720	4,633.75	7,957
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	1,171
Danish.....	1	4,467	2,690	4,473	2,737	3,362.50	8,000
Swedish.....	1	4,496	3,743	15,337	4,385	4,678.75	21,650
United States.....	9	40,337	30,509	54,694	30,407	37,683.00	69,287
Total.....	13	58,331	44,115	87,655	45,225	54,690.50	108,065
Australasia to Europe:							
British.....	11	90,820	64,458	104,810	64,970	80,572.50	53,053
French.....	1	3,797	3,089	5,106	3,077	3,861.25	3,570
Total.....	12	94,617	67,547	109,916	68,047	84,433.75	56,623
South America to Cristobal:							
Colombian.....	4	570	550	880	550	674.90	953
Dutch.....	1	742	294	780	323	367.50	420
German.....	4	3,491	2,260	4,347	2,334	2,825.00	2,966
Total.....	9	4,803	3,104	6,007	3,207	3,867.40	4,344
Philippine Islands to United States:							
Danish.....	1	5,523	3,091	5,086	3,168	3,863.75	7,484
Japanese.....	2	10,381	8,706	12,836	8,534	10,882.50	16,521
Norwegian.....	2	11,421	6,432	10,855	6,465	8,040.00	12,975
United States.....	3	20,128	16,362	26,884	16,905	20,452.50	22,120
Total.....	8	47,453	34,591	55,661	35,072	43,238.75	59,100
United States to Europe:							
British.....	4	13,163	10,583	18,247	10,772	13,126.72	21,124
Norwegian.....	1	5,667	4,869	8,202	4,855	6,086.25	10,762
Total.....	5	18,830	15,452	26,449	15,627	19,212.97	31,886
Far East to United States:							
Japanese.....	2	13,028	10,372	16,964	10,240	12,965.00	10,115
United States.....	2	16,449	13,808	21,088	13,662	17,260.00	12,503
Total.....	4	29,477	24,180	38,052	23,902	30,225.00	22,618
United States to Cristobal:							
United States.....	2	4,402	4,014	7,021	3,984	5,017.50	1,949
United States to South America:							
United States.....	2	7,652	4,896	8,038	4,897	6,120.00	8,193
Canadian intercoastal:							
British.....	2	8,229	6,523	11,151	6,884	8,153.75	11,351
Central America to Cristobal:							
British.....	2	1,441	1,286	2,298	1,304	1,607.50	1,260
South America to Canada:							
British.....	2	13,694	13,267	23,250	12,051	15,613.75	32,173
Far East to Europe:							
French.....	1	4,724	3,663	5,961	3,657	4,578.75	7,958
Norwegian.....	1	4,706	2,494	4,301	2,519	3,117.50	7,124
Total.....	2	9,430	6,157	10,262	6,176	7,696.25	15,082
Balboa to Cristobal:							
Colombian.....	1	60	49	97	49	43.20	.....
Panamanian.....	1	22	24	45	29	30.00	40
Total.....	2	82	73	142	78	73.20	40
United States to Central America:							
Danish.....	1	1,879	1,144	1,909	1,172	1,430.00	2,424

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States to West Indies: Norwegian.....	1	6,839	5,607	9,215	5,314	\$7,008.75	12,491
Central America to United States: German.....	1	3,370	2,515	4,159	2,535	2,426.40	.....
South America to Central America: British.....	1	4,546	3,916	6,233	3,948	3,273.12	.....
Hawaii to Europe: Swedish.....	1	4,860	2,781	4,960	3,665	3,476.25	6,098
Australasia to Canada: British.....	1	4,139	3,254	5,448	3,336	4,067.50	3,203
Far East to West Indies: Danish.....	1	4,751	4,318	4,488	2,738	5,397.50	8,530
Grand total, June, 1931.....	190	967,273	721,223	1,194,678	726,193	897,633.59	1,286,198
Grand total, June, 1930.....	219	1,066,634	803,976	1,337,332	812,704	1,001,229.66	1,447,529
Grand total, June, 1929.....	231	1,065,038	809,790	1,341,724	815,965	1,009,865.96	1,524,616

United States Intercoastal Traffic by Commodities for June, 1931.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for June, 1931, and the totals for June, 1930 and 1929. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Agricultural implements.....	226	130	356
Alfalfa.....	.....	579	579
Alfalfa meal.....	.....	660	660
Ammonia.....	60	.....	60
Asbestos.....	54	.....	54
Asphalt.....	709	30	739
Automobiles.....	5,213	213	5,426
Automobile accessories.....	1,214	132	1,346
Bamboo.....	.....	7	7
Bark.....	.....	10	10
Barley.....	13	18	31
Beans.....	16	2,322	2,338
Borax.....	.....	735	735
Bricks.....	.....	54	54
Burlap.....	296	90	386
Calcium carbide.....	141	.....	141
Camphor.....	.....	48	48
Canned:			
Fish.....	445	8,773	9,218
Fruit.....	862	23,753	24,615
Meat.....	70	188	258
Milk.....	18	754	772
Soup.....	1,182	.....	1,182
Vegetables.....	1,151	2,319	3,470
Miscellaneous and unclassified.....	919	5,472	6,391
Carbon black.....	22	.....	22
Celite filtercel.....	.....	874	874
Cement.....	529	.....	529
Charcoal.....	197	87	284
Chemicals.....	2,892	574	3,466
China and fire clay.....	30	135	165
Coal.....	2,279	.....	2,279
Cocoa.....	33	.....	33
Cocoanuts.....	15	563	578
Coffee.....	277	129	406
Coke.....	505	.....	505

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Cold storage:			
Cheese.....	24	31	55
Eggs.....	3	64	64
Fish.....	14		3
Lard.....	14		14
Other.....	187		187
Confectionery.....	550	10	560
Cork.....	24		24
Cotton.....	105	1,937	2,042
Cottonseed oilcake.....	224		224
Cyanide.....	83		83
Drugs and medicines.....	1,497	57	1,554
Earthenware.....	84		141
Eggs, dried.....		155	155
Explosives.....	123		123
Fertilizer.....	200		200
Flour.....	364	5,743	6,107
Fruit:			
Dried.....		7,075	7,075
Fresh.....		1,126	1,126
Fuller's earth.....	55		55
Furniture.....	523	81	604
General.....	23,746	11,299	35,045
Glass and glassware.....	2,371	83	2,454
Glue.....	86	142	228
Granite.....	35		35
Graphite.....	28		28
Guano.....		42	42
Gum.....		17	17
Hair.....	12	26	38
Hardwoods.....	343		343
Hay.....		161	161
Hemp.....		252	252
Hops.....		95	95
Infusorial earth.....		418	418
Ink.....	40		40
Kapok.....		134	134
Lard substitute.....	312		312
Lime.....	15		15
Linoleum.....	299		299
Liquors.....	156	10	166
Livestock.....	50		50
Lumber.....	2,193	156,068	158,261
Malt.....	147		147
Manufactured goods:			
Iron and steel.....	53,678	315	53,993
Machinery.....	3,457	1,247	4,704
Railroad material.....	3,319		3,319
Tinplate.....	8,041	63	8,104
Textiles.....	5,065	371	5,436
Miscellaneous.....	10,162	1,766	11,928
Marble.....	9		9
Matches.....	267	24	291
Metals:			
Antimony.....		18	18
Copper.....	9	3,529	2,538
Iron.....	457	5	462
Lead.....		1,115	1,115
Scrap.....	631	357	988
Tin.....		5	5
Zinc.....	18	509	527
Other.....	60		60
Milk, powdered.....	37	558	595
Molasses.....	120		120
Musical instruments.....	10		10
Nitrates.....	149		149
Nuts.....		724	724
Oats.....	66		66
Oils:			
Cottonseed.....	291		291
Crude.....	8,457		8,457
Gasoline, benzine, naphtha.....		154,831	154,831
Kerosene.....	125	6,249	6,374
Linseed.....	20		20
Lubricating and greases.....	7,524	2,321	9,845
Olive.....	15		15
Vegetable.....	300	106	406
Other.....		30	30
Ores:			
Iron.....	101		101
Magnesite.....		1,097	1,097
Other.....	200		200
Paint.....	626	60	686
Paper.....	7,041	7,906	14,947
Paper pulp.....	74	5,190	5,264

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Paper roofing	155		155
Peanuts	358	1,522	1,880
Peas		27	27
Phosphates	1,839		1,839
Porcelain	92	146	238
Quicksilver		35	35
Rags		328	328
Rice	131	48	179
Rope	187	234	421
Rosin	877		877
Rubber:			
Manufactured	1,974	131	2,105
Raw	32	114	146
Scrap		160	160
Salt	152		152
Sand	466		466
Seeds:			
Canary	17		17
Hemp		81	81
Other		727	727
Shells	883		883
Silk		771	771
Skins and hides		2,435	2,435
Slate	22		22
Soap	2,014	150	2,164
Soda	299		299
Soda ash	552		552
Soda, bicarbonate	65		65
Soda, caustic	435		435
Starch	115		115
Sugar	130	19,966	20,096
Sulphur	8,143		8,143
Syrup	171	30	201
Talc	36	44	80
Tallow		345	345
Tar	42		42
Tea		23	23
Tobacco	840	121	961
Toys	21		21
Turpentine	97		97
Vegetables		90	90
Waste	58	120	178
Wax	124	135	259
Wheat		53	53
Wine		162	162
Wool		10,907	10,907
Zinc oxide	125		125
Total, June, 1931	184,042	461,038	645,080
Total, June, 1930	246,048	526,100	772,148
Total, June, 1929	274,074	582,630	856,704

Comparison of Canal Traffic in June, 1931, with June Traffic in Previous Years.

Commercial traffic through the Canal during the month of June, 1931, with 400 transits, was the lowest June traffic with respect to the number of transits since 1925, when 368 commercial vessels were transited. The aggregate net tonnage (Panama Canal measurement) of 2,058,546 of the 400 vessels transiting last month was the lowest June tonnage since 1926, when a total of 1,990,344 net tons (in 419 vessels) were passed through. The cargo tonnage passing through in the past month, 1,758,976 tons, was the lowest June cargo tonnage since 1922, just prior to the beginning of the heavy mineral oil movement from California.

In comparison with June, 1930, traffic for the past month declined 78 transits (16.3 per cent), 299,691 net tons (12.7 per cent), and 388,205 cargo tons (18.1 per cent), and in comparison with June, 1929, decreased 103 transits (20.0 per cent), 293,885 net tons (12.5 per cent), and 665,026 cargo tons (27.4 per cent).

In the tabulation below are shown the number of transits, net tonnage (Panama Canal measurement), and the tons of cargo carried

through the Canal during the month of June each year from 1915 to 1931, inclusive, and for comparison the monthly averages for the corresponding fiscal year ending June 30 following:

Calendar year.	Month of June.			Fiscal year.	Average per month for fiscal year.		
	Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.		Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.
1915.....	142	498,084	567,285	1915.....	102	361,197	465,567
1916.....	121	381,256	482,767	1916.....	63	199,687	257,843
1917.....	170	528,614	630,638	1917.....	150	483,213	588,213
1918.....	169	573,944	629,210	1918.....	172	547,839	627,669
1919.....	161	517,442	586,887	1919.....	169	510,416	576,385
1920.....	201	704,712	834,421	1920.....	206	712,170	781,208
1921.....	192	761,477	694,720	1921.....	241	951,323	966,601
1922.....	228	970,713	977,478	1922.....	228	951,455	907,075
1923.....	417	2,035,902	2,096,446	1923.....	331	1,550,482	1,630,656
1924.....	377	1,928,039	2,022,850	1924.....	436	2,179,073	2,249,559
1925.....	368	1,753,327	1,920,323	1925.....	389	1,904,596	1,996,570
1926.....	419	1,990,344	2,134,686	1926.....	433	2,064,549	2,169,787
1927.....	455	2,152,926	2,229,097	1927.....	456	2,185,651	2,312,351
1928.....	481	2,227,865	2,139,565	1928.....	538	2,454,886	2,469,226
1929.....	503	2,352,431	2,424,002	1929.....	534	2,468,483	2,555,250
1930.....	478	2,358,237	2,147,181	1930.....	515	2,498,385	2,502,519
1931.....	400	2,058,546	1,758,976	1931.....	461	2,316,012	2,090,233

¹ Canal opened August 15, 1914.

² Average for 10½ months.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending July 11, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cristobal.....	Panama R. R. & S. S. Line.....		July 5.....		989
Baralt.....	Royal Netherlands S. S. Co.....		July 5.....		174
Margaret Johnson.....	Johnson Line.....		July 5.....		83
Reina del Pacifico.....	Pacific Steam Navigation Co.....		July 5.....		21
San Vincente.....	Quaker S. S. Line.....	July 5.....	July 6.....	120	(¹)
Ecuador.....	Panama Mail S. S. Co.....		July 6.....		752
Canca.....	National Navigation Co.....		July 6.....		65
Brielle.....	Royal Netherlands S. S. Co.....	July 6.....	July 6.....	142	41
Damsterdijk.....	Holland-America Line.....	July 6.....	July 6.....	(³)	36
Santa Barbara.....	Grace Line.....	July 6.....	July 7.....	90	638
Donau.....	North German Lloyd.....	July 6.....	July 7.....	60	262
Marstenen.....	Aluminium S. S. Line.....	July 6.....	July 7.....	628	(²)
Madalena.....	Hamburg-American Line.....	July 6.....	July 8.....	140	61
Tillie Lykes.....	Lykes Brothers.....	July 7.....	July 8.....	365	155
Nosa Queen.....	N. O. & S. A. S. S. Co.....	July 7.....	July 8.....	290	226
Guatemala.....	Panama Mail S. S. Co.....	July 7.....	July 8.....	1,167	(⁴)
Arizona.....	French Line.....	July 7.....	July 8.....	43	60
Arta.....	North German Lloyd.....	July 7.....	July 8.....	3½	210
Anachucuna.....	A. Tagaropoulos.....	July 7.....	July 8.....	32	(²)
Pellerin de Latouche.....	French Line.....	July 7.....	July 9.....	143	771
Tai Ping Yang.....	Barber S. S. Line.....	July 8.....	July 8.....	(¹)	79
Iriona.....	United Fruit Co.....	July 8.....	July 8.....	662	(²)
Sixaola.....	United Fruit Co.....	July 8.....	July 8.....	32	319
Zacapa.....	United Fruit Co.....	July 8.....	July 9.....	803	185
Bennekom.....	Royal Netherlands S. S. Co.....	July 8.....	July 9.....	134	150
Martinique.....	Colombian S. S. Line.....	July 9.....	July 10.....	(¹)	144
Esfuerzo.....	J. Asmusen.....	July 9.....	July 10.....	10	26½
City of San Francisco.....	Panama Mail S. S. Co.....	July 9.....	July 10.....	98	164
Santa Maria.....	Grace Line.....	July 9.....	July 10.....	389	144
Saramacca.....	United Fruit Co.....	July 9.....	July 10.....	579	(²)
President Harrison.....	Dollar Line.....	July 10.....	July 10.....	(¹)	2
Manizales.....	Roland Line.....	July 10.....	July 10.....		338
Calamares.....	United Fruit Co.....	July 10.....	July 10.....	351	46½
Nosa Prince.....	N. O. & S. A. S. S. Co.....	July 10.....	July 10.....	(¹)	385
Cefalu.....	Standard Fruit & S. S. Co.....	July 10.....	July 11.....	247	241
Durazzo.....	Hamburg-American Line.....	July 10.....	July 10.....	425	
Pearl Marie.....	R. Feuillebois.....	July 11.....	July 11.....	(¹)	26
Rhein.....	Hamburg-American Line.....	July 11.....	July 11.....	73	122
Iriona.....	United Fruit Co.....	July 11.....	July 11.....	10	44
Chile.....	Danish East Asiatic Co.....	July 11.....	July 11.....	101	
Kinai Maru.....	Osaka Shosen Kaisha.....	July 11.....	July 11.....	288	33
Santa Maria.....	Union Oil Co.....	July 11.....	July 11.....	11,282	
Guayaquil.....	Panama R. R. & S. S. Line.....	July 11.....	July 11.....	386	(²)
Buena Ventura.....	Panama R. R. & S. S. Line.....	July 11.....	July 11.....	791	
Salvador.....	Pacific Steam Navigation Co.....		July 11.....		830

¹ No cargo discharged.

² No cargo laded.

³ One case.

⁴ One package.

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Panamá Canal Traffic During the Fiscal Year 1931, Segregated by Nationality of Vessels.

Commercial traffic through the Panama Canal in the fiscal year 1931, was made up of 19 nationalities. Transits of vessels of the United States registry, totaling 2,417, exceeded those of any other nationality, with British, German, Norwegian, Japanese, Dutch, Danish, Swedish, and French following in order named. The vessels of these 9 nationalities made up 93.8 per cent of the total transits, 95.8 per cent of the net tonnage (Panama Canal measurement), paid 95.8 per cent of the tolls collected, and carried 96.4 per cent of the total cargo during the year.

The following statement shows the commercial traffic through the Canal during the fiscal year 1931, segregated according to registry of vessels, with the grand totals for the two preceding fiscal years:

TOTAL NATIONALITY TRAFFIC FOR FISCAL YEAR 1931.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	24	124,377	98,074	152,535	95,997	\$116,452.51	156,411
British.....	1,390	7,513,171	5,494,150	9,112,341	5,558,611	6,580,987.70	5,971,281
Chilean.....	42	170,928	122,226	244,552	136,747	166,782.50	99,234
Colombian.....	104	15,526	15,030	23,562	15,036	17,840.61	17,847
Danish.....	120	611,380	434,337	697,487	439,570	519,535.67	606,100
Danzig.....	27	184,928	153,853	260,698	147,527	165,459.25	185,982
Dutch.....	125	578,680	383,469	643,802	385,908	473,269.39	477,769
French.....	110	609,915	432,486	736,590	437,281	523,263.93	508,011
German.....	369	1,412,256	979,905	1,657,275	986,522	1,204,084.62	1,261,763
Greek.....	8	30,965	21,578	34,598	21,457	26,342.87	45,223
Italian.....	67	468,239	330,590	603,987	360,287	404,674.43	236,570
Japanese.....	193	1,019,832	856,815	1,294,940	841,343	1,052,413.33	1,104,512
Norwegian.....	363	1,748,728	1,203,067	2,002,601	1,204,848	1,403,922.86	1,720,383
Panamanian.....	36	82,841	50,180	86,913	50,884	60,204.86	55,422
Peruvian.....	2	7,088	7,020	10,124	5,788	8,565.60	7,328
Spanish.....	9	22,650	18,149	28,515	17,500	22,053.99	27,030
Swedish.....	111	528,282	372,389	962,881	454,798	424,924.05	721,945
United States.....	2,417	12,601,828	9,580,909	15,613,163	9,567,459	11,425,999.31	11,805,132
Yugoslav.....	12	55,532	40,962	66,260	40,838	48,679.09	74,807
Total, 1931.....	5,529	27,792,146	20,595,189	34,232,824	20,768,461	24,645,456.57	25,082,800
Total, 1930.....	6,185	29,980,614	22,683,006	37,430,657	22,797,619	27,076,890.01	30,030,232
Total, 1929.....	6,413	29,837,794	22,793,847	37,464,792	22,900,317	27,127,376.91	30,663,006

As related to the total traffic and as compared with the fiscal year 1930, the classification by nationality is more clearly shown in the following tabulation in which the percentage of the fiscal years' traffic (1930 and 1931) is substituted for actual figures. In the tabulation, figures are shown for only those nationalities contributing 500,000 or more net tons, Panama Canal measurement, others being grouped as "all others":

Nationality.	Percentage of total traffic in fiscal year.							
	No. of ships.		Panama Canal net tonnage.		Tolls.		Tons of cargo.	
	1930.	1931.	1930.	1931.	1930.	1931.	1930.	1931.
United States.....	47.0	43.7	48.5	45.3	49.0	46.4	48.3	47.1
British.....	25.0	25.1	26.7	27.0	26.6	26.7	25.2	23.8
Norwegian.....	6.0	6.5	5.5	6.3	5.2	5.7	6.0	6.9
German.....	6.1	6.6	4.8	5.1	4.6	4.9	4.6	5.0
Japanese.....	2.6	3.5	2.7	3.7	3.1	4.3	3.4	4.4
Danish.....	1.5	2.2	1.3	2.2	1.3	2.1	1.7	2.4
French.....	2.0	2.0	2.1	2.2	2.1	2.1	1.9	2.0
Dutch.....	2.3	2.2	2.2	2.1	2.1	1.9	2.1	1.9
Swedish.....	2.0	2.0	1.9	1.9	1.7	1.7	2.8	2.9
All others.....	5.5	6.2	4.3	4.2	4.3	4.2	4.0	3.6
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Foreign naval vessels, other than transports, colliers, hospital ships, and supply ships, pay tolls at the rate of \$0.50 per displacement ton. Included in above tabulations of transits and tolls, but not of tonnages are the following foreign naval vessels, and a training ship of the State of New York, transiting the Canal during the fiscal year 1931, and paying tolls on the basis of displacement:

	No. of ships.	Displacement tonnage.	Tolls.
British.....	7	100,394	\$50,197.00
Chilean.....	1	28,000	14,000.00
Spanish.....	1	3,297	1,648.50
United States.....	1	1,058	529.00
Total.....	10	132,749	66,374.50

Vessels of United States and British registry contributed the larger portion of the transits through the Canal in 1931. In comparison with 1930, United States traffic was 468 transits (16.2 per cent) lower while British traffic fell of 146 transits (9.5 per cent). Danish and Japanese traffic made increases of 29 transits (31.9 per cent) and 30 transits (18.4 per cent), respectively, while the 5 others of the 9 leading nationalities decreased in number of transits.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 11, 1931.

No. 910.

1. Panama Bay, Pacific approaches to Panama Canal, sunken sand barge, buoy marking wreck established. (Supplement to Notice No. 909.)

A gas buoy, showing a fixed red light and painted red and black horizontal stripes was established July 10, 1931, marking the wreck of a sunken sand barge. This barge lies in 18 feet of water at mean low water in a north and south direction.

The buoy is located 50 feet southeast by south of the wreck, which is 1,250 yards north of Tortolita Island.

2. Panama Bay, Pacific approaches to Panama Canal, wreck buoy discontinued.

The gas buoy marking the wreck of the steamer *Los Santos*, located on the north side of Flamenco Island, was discontinued on July 10, 1931. A line drawn through the center of San Jose Rock and right tangent of Perico Island passes directly over the wreck.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 16, 1931.

No. 911.

Colombia, Cortagena Harbor, light buoy replaced on station. The following is quoted from Notice to Mariners No. 26, dated Washington, D. C., June 27, 1931:

The master of the American steamship *El Salvador* reports that the light buoy showing a flashing white light on the southwestern side of the channel northward of Castillo Grande Point has been replaced on its station.

Approximate position, 10° 24' N., 75° 32' W.

H. BURGESS,
Governor.

CANAL WORK IN JUNE, 1931.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of June, 1931.

BALBOA HEIGHTS, C. Z., July 14, 1931.

*The Honorable, the Secretary of War,
Washington, D. C.*

SIR: I have the honor to submit the following report of The Panama Canal for the month of June, 1931, which closed the fiscal year ended June 30, 1931:

CANAL TRAFFIC FOR FISCAL YEAR.

The fiscal year 1931 was the seventeenth fiscal year of Canal operation. The number of vessels transiting the Canal, and the revenues collected in tolls for the year are as follows:

	Number of transits.	Tolls collected.
Commercial vessels.....	5,529	\$24,645,456.57
Launches.....	113	652.32
Noncommercial vessels:		
United States Government.....	544	
Panamanian Government.....	7	
Transiting for repairs.....	17	
Total.....	6,210	24,646,108.89

If the 568 noncommercial vessels that transited the Canal during the year had paid tolls at commercial rates, the revenue would have been increased approximately as follows:

United States Government vessels.....	\$1,157,853.20
All other.....	23,251.29
Total.....	1,181,104.49

The 5,529 commercial vessels carried 25,082,800 long tons of cargo, and the 568 noncommercial vessels carried 131,775 long tons, making the total cargo through the Canal for the year 25,214,575 long tons, or an average of 2,101,215 tons per month.

The commercial traffic during the fiscal year 1931, in addition to showing a marked reduction in comparison with the previous fiscal year, is the lowest fiscal year's traffic since 1927 with respect to the number of transits, ship tonnage, and tolls collected, and in point of cargo tonnage the lowest fiscal year since 1925. The past year's traffic in comparison with the previous low year for each feature is presented in the following tabulation:

	Fiscal year 1931.	Previous low fiscal year.	Fiscal year.
Number of transits.....	5,529	5,475	1927
Panama Canal net tonnage.....	27,792,146	26,227,815	1927
Tolls.....	\$24,645,456.57	\$24,228,830.11	1927
Tons of cargo.....	25,082,800	23,958,836	1925

In comparison with the fiscal year 1930, commercial traffic for 1931 registered a decrease of 656 transits, or 10.6 per cent; 2,188,468 tons, or 7.3 per cent, in net tonnage (Panama Canal measurement); \$2,431,433.44, or 9.0 per cent, in tolls collected; and 4,947,432, or 16.5 per cent, in cargo tonnage.

The following tabulation gives a comparison of the traffic for the fiscal year 1931 with that in the two fiscal years immediately preceding:

	Fiscal year, 1929.	Fiscal year, 1930.	Fiscal year, 1931.
Number of transits.....	6,413	6,185	5,529
Panama Canal net tonnage.....	29,837,794	29,980,614	27,792,146
United States net tonnage.....	22,793,847	22,683,006	20,595,189
Registered gross tonnage.....	37,464,792	37,430,657	34,232,824
Registered net tonnage.....	22,900,317	22,797,619	20,768,461
Tolls.....	\$27,127,376.91	\$27,076,890.01	\$24,645,456.57
Tons of cargo.....	30,663,006	30,030,232	25,082,800

COMMERCIAL TRAFFIC.

The following tabulation shows the number of vessels, Panama Canal net tonnage, tons of cargo carried, and tolls collected from vessels transiting the Canal by months for the fiscal year 1931, as compared with the previous fiscal year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929-30	1930-1	1929-30.	1930-1.	1929-30.	1930-1.	1929-30.	1930-1.
July.....	527	488	2,468,280	2,438,895	2,598,162	2,402,047	\$2,259,582.37	\$2,180,511.82
August....	541	465	2,558,739	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
September..	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.58
October....	564	517	2,747,949	2,584,160	2,845,643	2,394,410	2,485,897.71	2,288,982.08
November...	525	479	2,498,906	2,371,487	2,534,631	2,263,200	2,244,895.94	2,098,357.36
December...	522	495	2,548,771	2,473,626	2,524,934	2,166,884	2,309,030.88	2,192,583.85
January....	531	476	2,601,628	2,380,871	2,611,632	2,106,937	2,360,211.24	2,108,140.42
February...	491	431	2,369,255	2,134,866	2,377,900	1,930,219	2,131,386.12	1,915,902.78
March.....	515	439	2,505,859	2,211,934	2,558,238	1,915,507	2,260,002.36	1,964,434.22
April.....	489	453	2,479,096	2,292,805	2,456,782	2,011,117	2,232,763.00	2,014,349.13
May.....	479	428	2,418,633	2,184,959	2,261,616	1,925,452	2,162,898.60	1,923,452.18
June.....	478	400	2,358,237	2,058,546	2,147,181	1,758,976	2,100,994.53	1,821,408.73
Total.....	6,185	5,529	29,980,614	27,792,146	30,030,232	25,082,800	27,076,890.01	24,645,456.57

* Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these governments, and vessels transiting solely for repairs, do not pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

CANAL TRAFFIC FOR JUNE, 1931.

TRANSITS AND TOLLS.

During the month of June, 400 commercial vessels and 5 small nonseagoing launches measuring under 20 tons transited the Canal. In addition to these there were 26 vessels belonging to the United States Government and 1 transit of a vessel solely for repairs, making a total of 432 transits for the month, or a daily average of 14.40.

Tolls on the 400 commercial vessels amounted to \$1,821,408.73, and on the launches to \$27.75, a total of \$1,821,436.48, or a daily average on all traffic of \$60,714.55. In comparison with the previous month, traffic for June, 1931, was lower by 28 transits and \$102,043.45 in tolls, or 6.5 per cent and 5.3 per cent, respectively. In comparison with June, 1930, there was a decrease of 78 transits and \$279,585.80 in tolls, or 16.3 per cent and 13.3 per cent, respectively. In addition to contributing the lowest traffic in the fiscal year, the past month's traffic was the lowest since September, 1925, when 388 vessels, paying \$1,692,723.11, were passed through.

The total numbers of craft of all kinds transiting the Canal during the month of June in the two preceding years and in 1931, are shown in the following tabulation:

	June, 1929.	June, 1930.	June, 1931.
Commercial vessels.....	503	478	400
Launches (under 20 tons).....	10	14	5
Noncommercial vessels:			
United States Government.....	30	73	26
Panamanian Government.....	2	2	.....
Vessels for repairs.....	2	.....	1
Total.....	547	567	432

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun.....	5	11	16
Pedro Miguel.....	11	20	31
Miraflores.....	11	19	30
Total.....	27	50	77

The following is a summary of the commercial traffic for June in the years 1929, 1930, and 1931, and comparison with the monthly averages for the fiscal year 1931:

	June, 1929.	June, 1930.	June, 1931.	Average per month for fiscal year 1931.
Number of vessels.....	503	478	400	461
Panama Canal net tonnage.....	2,352,421	2,358,237	2,058,546	2,316,012
United States net tonnage.....	1,787,779	1,784,970	1,515,047	1,716,266
Registered gross tonnage.....	2,946,181	2,971,112	2,525,377	2,852,735
Registered net tonnage.....	1,797,003	1,805,218	1,528,993	1,730,705
Tolls.....	\$2,127,805.97	\$2,100,994.53	\$1,821,408.73	\$2,053,788.04
Tons of cargo carried.....	2,424,002	2,147,181	1,758,976	2,090,233

The average daily number of transits, net tonnage (Panama Canal measurement), tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for fiscal year 1931.
	June, 1929.	June, 1930.	June, 1931.	
Number of transits	16.76	15.93	13.13	15.15
Panama Canal net tonnage	78,414	78,608	68,618	76,143
Tolls	\$70,926.87	\$70,033.15	\$60,713.62	\$67,521.80
Tons of cargo carried	80,800	71,573	53,633	68,720

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of June in 1929, 1930, and 1931, are shown in the following tabulation:

	Average per vessel.		
	June, 1929.	June, 1930.	June, 1931.
Panama Canal net tonnage	4,677	4,934	4,146
United States net tonnage	3,554	3,734	3,788
Registered gross tonnage	5,857	6,216	6,313
Registered net tonnage	3,572	3,777	3,822
Tolls	\$4,230.23	\$4,395.39	\$4,553.52
Tons of cargo (including vessels in ballast)	4,819	4,492	4,398
Tons of cargo (laden vessels only)	5,598	5,506	5,189

NATIONALITY OF VESSELS.

Sixteen (16) nationalities were represented in the commercial traffic through the Canal in June, 1931. Vessels of United States registry, with 174, led in the number of transits, while those flying the British flag, with 102, were second. Vessels of these two nationalities made up 69 per cent of the total transits for the month. Vessels of German and Norwegian registry were next, with 28 and 20, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo through the Canal during the month of June, 1931, with 1,758,976 tons, was the lowest cargo tonnage through the Canal since February, 1923, when 1,563,278 tons were passed through. In comparison with June, 1930, there was a decrease of 388,205 tons, or 18.1 per cent. Tonnage from the Atlantic to the Pacific aggregated 472,778 tons, as compared with 519,844 tons for the previous month, and 699,652 tons for June, 1930. From the Pacific to the Atlantic there were 1,286,198 tons, as compared with 1,405,608 tons for the previous month and 1,447,529 tons for June, 1930.

From the Atlantic to the Pacific various manufactured goods, totaling 157,359 tons, constituted the heaviest item of cargo, followed by mineral oils with 32,254 tons, phosphates with 22,631 tons, sulphur with 17,778 tons, tobacco with 16,858 tons, paper with 16,225 tons, and cement with 15,247 tons. There was a decrease of 226,874 tons, or 32.4 per cent, in cargo moving in this direction in comparison with June, 1930.

From the Pacific to the Atlantic mineral oils formed the leading commodity, totaling in June, 1931, 263,093 tons. This was followed by lumber with 220,287 tons; wheat with 195,947 tons; ores with 78,573 tons; sugar with 76,784 tons; miscellaneous canned goods with 56,939 tons; and nitrates with 47,591 tons. Wheat shipments increased 81,059 tons, or 70.5 per cent; canned goods, 23,611 tons, or 70.8 per cent; and nitrates, 2,744 tons, or 6.1 per cent. The other items listed above decreased as follows in comparison with June, 1930: Mineral oils, 162,617 tons, or 38.2 per cent; lumber, 29,948 tons, or 12.0 per cent; ores, 129,867 tons, or 62.3 per cent; and sugar, 968 tons, or 1.2 per cent. In aggregate there was a decrease of 161,331 tons, or 11.2 per cent, in cargo routed in this direction.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton, nor be less than \$0.75 per ton as determined in accordance with the United States rules of measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.912 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.718 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of June, 1931, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flags:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$12,032.85	\$11,175.00		\$857.85
British.....	478,906.29	515,157.80	\$36,251.51	
Chilean.....	8,703.75	9,470.60	766.85	
Colombian.....	1,387.00	1,176.00		211.00
Danish.....	54,516.54	54,513.60		2.94
Danzig.....	14,756.28	13,158.40		1,597.88
Dutch.....	32,491.93	38,720.40	6,228.47	
French.....	30,101.25	36,431.00	6,329.75	
German.....	97,435.15	114,001.00	16,565.85	
Italian.....	29,757.50	36,633.00	6,875.50	
Japanese.....	73,734.62	71,560.60		2,174.02
Norwegian.....	82,033.80	98,727.00	16,693.20	
Panamanian.....	56.40	44.00		12.40
Swedish.....	30,830.24	34,430.00	3,599.76	
United States.....	867,502.57	901,936.40	34,433.83	
Yugoslav.....	7,162.56	5,968.80		1,193.76
Total.....	1,821,408.73	1,943,103.60	127,744.72	6,049.85
Net increase on all traffic.....			121,694.87	

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$24,509.95
United States foreign trade.....	11,067.62
United States—Canal Zone trade.....	1,143.74
Total.....	34,433.83

¹ Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in June, 1931, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....		1.74	1.74
British.....	.55	1.27	.98
Chilean.....	.24	.25	.24
Colombian.....	.83	1.68	1.26
Danish.....	.83	1.57	1.39
Danzig.....		1.92	1.92
Dutch.....		1.43	.86
French.....	.38	1.33	.91
German.....	.37	1.28	.81
Italian.....	.15	.63	.35
Japanese.....	.80	1.14	.91
Norwegian.....	.92	1.53	1.26
Panamanian.....	2.09	1.82	1.95
Swedish.....	.71	2.36	1.68
United States.....	.61	1.34	.99
Averages, June, 1931.....	.59	1.34	.99
Averages, June, 1930.....	.79	1.37	1.11
Averages, June, 1929.....	.94	1.44	1.20

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of June is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	1	6,783	\$5,985.00	25	140,703	\$147,586.25
Ballast.....	22	130,531	93,982.32	1	4,546	3,273.12
General cargo ships:						
Laden.....	151	804,356	716,520.75	161	818,043	743,907.90
Ballast.....	32	148,152	106,216.59	1	3,370	2,426.40
Noncargo-carrying ships:						
Dredge.....	1	1,240	924.48			
Launch.....				1	60	43.20
Tugs.....	2	156	80.00			
Yachts.....	1	55	66.00	1	551	396.72
Total.....	210	1,091,273	923,775.14	190	967,273	897,633.59
Method of propulsion:						
Steam.....	140	717,975	627,911.57	141	711,644	670,852.99
Motor.....	68	373,134	295,742.31	49	255,629	226,780.60
Motor schooner.....	1	58	41.76			
Nonpropelled.....	1	106	79.50			
Total.....	210	1,091,273	923,775.14	190	967,273	897,633.59

Of the 281 steam-driven vessels, 209 were oil burning, 67 coal burning, and 5 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of June, 1931. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Cargo ships.....	1	3,434	\$4,292.50			
Gunboats.....				1	1,425	\$712.50
Submarines.....	4	3,490	1,745.00	7	6,162	3,081.00
Tankers.....	1	5,102	3,673.44	2	11,118	13,897.50
Tugs.....	1	1,000	500.00	1	1,000	500.00
U. S. Army vessels:						
Launches.....	1	10	7.50			
Transports.....	3	11,724	14,655.00	2	7,816	9,770.00
Tugs.....	1	92	69.00	1	92	115.00
Total, U. S. Government.....	12		24,942.44	14		28,076.00
Vessels for repairs:						
Tankers.....	1	1,646	1,234.50			
Grand total.....	13		26,176.94	14		28,076.00

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of June, 1931, carried cargo as follows: Atlantic to Pacific, 4,937 tons; Pacific to Atlantic, 18,376 tons; total, 23,313 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of June, 1931. These launches, although paying tolls, are excepted from statements concerning commercial traffic.

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	3	12	\$12.60
Pacific to Atlantic.....	2	13	15.15
Total.....	5	25	27.75

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of June, 1931, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons	68,680	37,499	106,189
Local cargo shipped..... tons	7,031	1,461	8,492
Transit cargo arriving..... tons	1,761,326	1,776,866	3,538,192
Transit cargo clearing..... tons	1,775,075	1,770,837	3,545,912
Cargo received for transshipment..... tons	24,666	523	25,189
Cargo transhipped..... tons	24,144	254	24,398
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	133	44	177
Number of releases issued.....	720	165	885
Tons received..... tons	1,573	283	1,856
Tons withdrawn..... tons	1,520	220	1,740
Packages received.....	8,836	1,994	10,830
Packages withdrawn.....	7,359	1,205	8,564
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	24		24
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons	8,281		8,281
Coal issued, miscellaneous:			
Panama Canal departments..... tons	60	6	66
U. S. Army, including vessels..... tons	258		258
Individuals and companies, including galley coal for ships..... tons	77	6	83
Transferred to Navy..... tons	6		6
Total sales and issues..... tons	8,682	6	8,688
Coal on hand, June 1, 1931..... tons	49,637		49,637
Coal on hand, July 1, 1931..... tons	62,297		62,297
Coal received during month..... tons	21,342		21,342
Coal received from Navy..... tons		6	6
Fule oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls.	3,148.14	14,502.16	17,650.30
Panama Railroad Company..... bbls.	965.15	528.05	1,493.20
U. S. Army and Navy..... bbls.		171.99	171.99
Individuals and companies..... bbls.		117.62	117.62
Total sales and issues..... bbls.	4,113.29	15,319.82	19,433.11
Fuel oil on hand July 1, 1931..... bbls.	46,847.52	62,676.32	109,523.84
Diesel oil sold during June, 1931..... bbls.	220.04	2,002.90	2,222.94
Diesel oil on hand July 1, 1931..... bbls.	1,083.35	26,132.28	27,215.63
Miscellaneous transfers..... bbls.	448.36	854.70	1,303.06
Gasoline and kerosene pumped for The Panama Canal..... bbls.	2,493.00	5,085.70	7,578.70
Gasoline pumped for individuals and companies..... bbls.	992.76	6,493.93	7,486.69
Oil pumped for individuals and companies:			
Receipts..... bbls.	132,419.31	225,709.35	358,128.66
Issues..... bbls.	209,208.91	157,628.35	366,837.26
Oil pumped for U. S. Navy..... bbls.	42,294.00	7,121.00	49,415.00
Total fuel oil, gasoline, and kerosene handled..... bbls.	392,189.67	420,215.75	812,405.42
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	13		13
Measured for Panama Canal net tonnage.....	3		3
Remeasured for Panama Canal net tonnage.....	13		13
Panama Canal net tonnage corrected.....	1	6	7
U. S. equivalent tonnage corrected.....	7	11	18
Services of harbor equipment:			
Tugs, total operating hours.....	289½	120	409½
Launches, total operating hours.....	1,107½	1,125	2,232½
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$9,921.25	\$4,147.50	\$14,068.75
Pilotage.....	16,457.00	6,130.00	22,587.00
Seamen.....	9,736.00	8,848.00	18,584.00
Launch service.....	1,840.00	1,978.00	3,818.00
Wharfage.....	12,561.33	4,450.64	17,011.97
Ships measured.....	100.00		100.00
Miscellaneous.....	202.80	426.10	628.90
Ships repaired at Panama Canal shops:			
Commercial.....	37	5	42
U. S. Army and Navy.....	7	12	19
Panama Canal equipment.....	4	6	10
Total.....	48	23	71

	Cristobal.	Balboa.	Total.
Vessels dry docked:			
Commercial.....	1		1
U. S. Army and Navy.....	3	1	4
Panama Canal equipment.....		2	2
Total.....	4	3	7
Clearances issued.....	233	216	449
Bills of health issued.....	241	220	461

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal..	453	2,888,412	1,742,484	419	2,643,303	1,599,186
Vessels entering port but not transiting Canal.	59	307,021	180,421	7	37,629	25,076
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	120	785,290	470,749	92	637,016	378,343
<i>Ships clearing.</i>						
All vessels, including those transiting Canal..	454	2,897,593	1,747,512	421	2,641,558	1,601,639
Vessels clearing port but not transiting Canal.	57	307,481	180,000	7	37,629	25,076
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	122	786,402	471,547	91	635,038	376,388

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class	Others.	Total.	First-class.	Others.	Total.
<i>Disembarking:</i>						
From Atlantic ports.....	1,095	890	1,985	176	471	647
From Pacific ports.....	158	138	296	239	229	468
Total disembarking.....	1,253	1,028	2,281	415	700	1,115
<i>Embarking:</i>						
For Atlantic ports.....	1,337	817	2,154	174	430	604
For Pacific ports.....	176	242	418	258	253	511
Total embarking.....	1,513	1,059	2,572	432	683	1,115
<i>Remaining on board:</i>						
From Atlantic to Pacific ports.....	1,344	2,372	3,716	1,447	1,924	3,371
From Pacific to Atlantic ports.....	1,109	1,762	2,871	1,130	1,919	3,049
From Atlantic to Atlantic ports.....	489	77	566			
From Pacific to Pacific ports.....				14	73	87
Total remaining on board.....	2,942	4,211	7,153	2,591	3,916	6,507
Total arriving.....	4,195	5,239	9,434	3,006	4,616	7,622
Total departing.....	4,455	5,270	9,725	3,023	4,599	7,622

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	210	53	25.2
Pacific to Atlantic.....	190	57	28.9
Total.....	400	110	27.5

In addition to the aforesaid, 46 passenger-carrying vessels called at the port of Cristobal and 3 at Balboa without transiting the Canal, making a total of 159 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of June, 1931, 32 commercial airplanes entered and cleared at Cristobal, and 1 at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of June, 1931, together with the total sales in the corresponding months in 1930 and 1929.

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels	\$1,384.55	\$8,366.41	\$14,570.12	\$196.42	\$5,290.48	\$29,807.98
Government vessels	75.60	540.45	3,896.71	4.17	758.69	5,275.62
P. R. R. vessels	2.40	350.67	171.68	743.40	27.72	1,295.87
Total sales, June, 1931	1,462.55	9,257.53	18,638.51	943.99	6,076.89	36,379.47
Total sales, June, 1930	2,512.08	13,275.90	34,074.36	861.21	9,703.95	60,427.50
Total sales, June, 1929	2,521.65	11,150.19	37,449.22	1,040.04	5,316.35	57,477.45
Sales at Balboa to:						
Commercial vessels	400.30	3,074.74	6,338.33	436.16	3,483.80	13,733.33
Government vessels	265.80	1,878.07	10,031.80	466.79	987.70	13,630.16
P. R. R. vessels			10.80	39.50		50.30
Total sales, June, 1931	666.10	4,952.81	16,380.93	942.45	4,471.50	27,413.79
Total sales, June, 1930	1,653.62	4,351.26	42,430.10	1,059.32	26,532.53	76,026.83
Total sales, June, 1929	1,067.48	11,022.62	23,328.69	924.96	3,620.98	39,964.73

The aggregate sales to Government vessels during the month was \$18,905.78; to Panama Railroad vessels, \$1,346.17; and to other commercial vessels, \$43,541.31; making the total sales to all vessels, \$63,793.26. The figures are subject to minor change on final audit.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of June, 1931, as compared with the corresponding month in 1930 and 1929:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. †			June, 1929.	June, 1930.	June, 1931.
	North.	South.	Total.	North.	South.	Total.			
Gatun	183	200	383	10	8	18	496	499	401
Pedro Miguel	187	204	391	14	17	31	523	523	422
Miraflores	188	200	388	14	15	29	520	519	417
Number of vessels put through locks.									
Gatun	189	209	398	21	29	50	572	590	448
Pedro Miguel	190	209	399	29	35	64	640	598	463
Miraflores	190	209	399	29	34	63	631	602	462

† Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels	28	29	29
Panama Canal equipment	16	31	30
Launches (under 20 tons)	5	3	3
Vessels for repairs	1	1	1

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in June, 1931, as compared with the preceding month and the corresponding month in 1930:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages	1,613,020,000	1,262,000,000	1,261,000,000
Maintenance	10,160,000		
Leakage	30,000,000	30,000,000	20,000,000
Total, June, 1931	1,653,180,000	1,292,000,000	1,281,000,000
Total, May, 1931	1,669,620,000	1,255,410,000	1,305,050,000
Total, June, 1930	1,982,360,000	1,567,860,000	1,552,580,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of June, 1931, are shown in comparative form, in the following tabulation:

	June,		June—Years of record.		
	1930.	1931.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Discharge of Chagres River at Alhajuela	2,015	2,229	4,870	1,363	2,512
Maximum momentary discharge for the month	7,398	11,510	63,900		
Gatun Lake watershed, total yield	3,961	6,330	10,391	3,961	6,429
Gatun Lake watershed, net yield	3,294	5,731	9,863	3,294	5,856
Drift on Gatun Lake for lockages and power	2,871	2,713	2,947	1,138	2,250

* June 14, 1909.

* 1914 excluded.

The monthly mean discharge of the Chagres River at Alhajuela for June, 1931, was 2,229 c. f. s., which is 12 per cent below the 30-year average of 2,512 c. f. s. The maximum monthly mean discharge on record for June is 4,870 c. f. s. in 1909, and the minimum 1,363 c. f. s. in 1906. The maximum momentary discharge for the month was 11,510 c. f. s. at elevation 98.32 feet on the 10th and 11th, and the minimum was 870 c. f. s. at elevation 92.19 feet on the 8th. The maximum momentary discharge on record for June is 63,900 c. f. s. at elevation 109 feet on June 14, 1909, and the minimum is 504 c. f. s. at elevation 90.79 feet on June 1, 1920.

Gatun Lake varied in elevation during June from a minimum of 83.17 feet on the 9th and 10th to a maximum of 84.84 feet on the 30th. The total yield of the Gatun Lake watershed was 6,330 c. f. s., which is 2 per cent below the 18-year average of 6,429 c. f. s. The maximum total yield on record for June is 10,391 c. f. s. in 1927, and the minimum is 3,961 in 1930.

Miraflores Lake varied in elevation from a maximum of 54.40 feet on the 16th to a minimum of 53.15 feet on the 26th. The monthly mean elevation was 53.76 feet, and at midnight on the 30th the lake stood at elevation 53.68 feet.

SEISMOLOGY.

Four seismic disturbances were recorded during the month—on the 8th, 16th, 27th, and 30th. The disturbances on the 16th and 27th were felt by residents of the Canal Zone and Republic of Panama.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,429,100 kilowatt hours, and the computed water consumption was 4,144,443,680 cubic feet. Continuous service was maintained at this station throughout the month. The Miraflores Diesel-electric station had a gross generator output of 6,300 kilowatt hours, and the fuel oil consumption was 23.39 barrels. This station was operated only for dry-dock pump operations and test purposes during the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 18 vessels during the month. There were 455 work orders issued during the month, as compared with 393 issued during the previous month.

MECHANICAL DIVISION.

During the month of June, 1931, miscellaneous repairs were made on 48 vessels at Cristobal and 23 at Balboa. Four vessels were dry docked at Cristobal and 3 at Balboa. Work on the general overhaul of the United States Navy's minesweeper *Chevink* and submarine *S-12* was continued during the month. Annual overhaul was begun on the Navy's submarine *S-13*. Work was completed or carried forward on several pieces of Canal equipment, including the construction of the ferry boats *President Roosevelt* and *Presidente Amador*.

MUNICIPAL ENGINEERING DIVISION.

In connection with the replacement of pipe lines on dock No. 8 water system, there were installed 4,455 feet of cast iron pipe, and other auxiliary work in connection therewith. On the Thatcher Highway a small amount of grading was performed, consisting of removing slides and filling washouts in shoulders. The dike line for the hydraulic fill at the west ferry slip was 80 per cent completed. Clearing was completed for change in alignment near the west ferry approach. On the Farfan Road, 4,400 cubic yards were excavated, and two 24-inch culverts were installed and head-walls completed for four 24-inch culverts.

Work on several improvement projects in the cities of Panama and Colon was carried on.

The usual work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 722,045,950 gallons.

DREDGING DIVISION.

The general movement along the waterfront of West Culebra slide continued throughout the month was an average movement of 0.8 foot toward the Canal, between stations 1771-00 and 1795-00 W., and 0.8 foot southward between stations 1772-00 and 177-00 W. The reference points on this slide showed a slight movement during the month.

Three additional observation points (8 in all) were placed on Cartagena slide and observed daily. This area, covering 5.6 acres, showed a slow settlement throughout the month. A dredge removed 62,400 cubic yards of slide material from the slide between stations 1905-00 and 1911-00 W. during the month. Small bank breaks occurred in a number of places throughout the cut during the month, owing to recent heavy rains.

There was no interference with shipping on account of slides during the month.

The total excavation during June, 1931, was 462,255 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
Work excavation:			
Canal Prism, Gaillard Cut:			
Project No. 5.....	11,300	45,250	56,550
Cartagena slide, maintenance.....	12,450	49,950	62,400
Maintenance.....	1,850	16,650	18,500
Canal prism, Pacific entrance:			
Project No. 1.....		31,250	31,250
Project No. 1-B.....	202,600	2,050	204,650
Maintenance.....	85,800		85,800
Plant excavation:			
Chame sand service.....	3,105		3,105
Total.....	317,105	145,150	462,255

The ferry operating at the north end of Pedro Miguel locks functioned 30 days during the month. One thousand three hundred and twenty-six (1,326) single trips were made, and 64 Panama Canal, 54 U. S. Army, and 4,223 other vehicles, a total of 4,341, were ferried across the Canal.

MADDEN DAM PROJECT.

The location of the transmission line entrance into the permanent power house was established and a straight line run between this point and tower No. 81. To the end of the month 57 of the 82 towers has been completed. Work was carried on during the month on the construction of five cottages, one bachelor building, and a mess hall, which will be part of the Government camp. Work of a miscellaneous nature such as preparation of drawings, gathering of hydraulic information, clearing and grubbing, filling of sinkhole No. 20, experimental clay grouting, surveying, etc., was continued during the month.

Full size copies of all drawings for Madden Dam specifications were received from Denver; also mimeographed copy of specifications without drawings.

SCHOOLS.

The school year for the white and colored schools terminated June 30, 1931. There were 94 graduates from the high schools, 62 at Balboa and 32 at Cristobal. Of the 105 American teachers, 6 resigned at the end of the school year, and the remaining teachers were granted 92 days leave of absence without pay.

The following brief summary shows the enrollment, average attendance, etc., in the white and colored schools of the Canal Zone for the year ended June 30, 1931, as compared with the year ended June, 1930:

	White.		Colored.		Total.	
	1930.	1931.	1930.	1931.	1930.	1931.
Net enrollment.....	2,790	3,083	4,080	4,230	6,870	7,313
Average daily attendance.....	2,393.3	2,641.0	3,562.4	3,731.4	5,955.7	6,372.4
Number of teachers.....	96	105	85	89	181	194

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on June 30, 1931, was 23,835, composed of 8,017 Americans, 2,867 of whom were men, 2,481 women, and 2,669 children; 177 Europeans, 86 of whom were men, 30 women, and 61 children; and 15,641 West Indians, 4,257 of whom were men, 2,836 women, and 8,548 children. The total number of persons in quarters on June 30, 1930, was 22,615.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of June 17, 1931, with a comparison of the working force for the preceding month and for June, 1930:

	Total employees.		As of June 17, 1931.		
	June, 1930.	May, 1931.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	140	106	55	49	104
Electrical.....	335	375	170	205	375
Municipal Engineering.....	762	873	89	771	860
Lock Operation.....	941	935	236	682	918
Dredging.....	1,179	1,172	194	931	1,125
Madden Project.....	669	258	26	237	263
Mechanical.....	1,388	1,380	475	908	1,383
Marine.....	799	747	196	564	760
Fortifications.....	165	105	18	56	74
Total.....	6,378	5,951	1,459	4,403	5,862
Supply Department:					
Quartermaster.....	2,203	1,746	203	1,650	1,853
Commissary.....	1,552	1,548	249	1,305	1,554
Cattle Industry—Plantations.....	100	97	2	59	91
Hotel Tivoli.....	116	112	8	103	111
Hotel Washington.....	104	99	9	92	101
Transportation.....	325	306	72	228	300
Total.....	4,400	3,903	543	3,467	4,010
Accounting Department.....	210	211	206	6	212
Health Department.....	1,155	1,109	290	822	1,112
Executive Department.....	865	883	553	333	886
Total.....	2,230	2,203	1,049	1,161	2,210
Panama Railroad Company:					
Superintendent.....	302	284	44	235	279
Transportation.....	188	179	61	116	177
Receiving and Forwarding Agency.....	1,377	1,371	78	1,074	1,152
Coaling Stations.....	249	241	42	168	210
Total.....	2,116	2,075	225	1,593	1,818
Grand total, June, 1930.....	15,124				
Grand total, May, 1931.....		14,137			
Grand total, June, 1931.....			3,276	10,624	13,900

Additions to the gold force on the Isthmus in June were as follows: Employed in the United States, 6; employed on the Isthmus, 22; reemployed on the Isthmus, 11; total, 39. Separations from the gold force totaled 21, as follows: Resigned, 16; discharged, 4; died, 1. At the end of the month there were on file 850 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 194 deaths occurred during the month of June, 1931, among the population of the Canal Zone, and the cities of Panama and Colon (population, 143,636), which is equivalent to an annual death rate of 16.21 per 1,000 population. The

leading causes of death were: Tuberculosis of the respiratory system, 33; pneumonia (broncho and lobar), 30; diarrhea and enteritis, 19; organic diseases of the heart, 12; and cancer (various organs), 9. There were 5 deaths from nephritis, and 1 from leprosy. There were 24 deaths among nonresidents, which are not included in the above statistics.

There were 298 live births and 8 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 25.56. Deaths among children under 1 year of age numbered 38, giving an infant mortality rate based on the number of live births reported, of 127.52.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon was 458, of whom 70 were employees (17 white and 53 colored), 47 were members of employees' families (7 white and 40 colored), 45 were Canal Zone agriculturists, 118 were other civilian nonemployees, and 178 were Army and Navy personnel. Of the 117 employees and members of employees' families, 37 were probably infected outside our sanitated areas, as they gave history of working, living, or having been in such areas at night previous to their becoming sick.

There were 4 deaths from malaria among residents, 1 American employee, 1 colored child living on a farm near Gamboa, 1 colored child living at Gatun, who received infection while in the interior of Panama, and a colored resident of Colon, who received infection while living in Colombia.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$361,384.31, of which \$346,310.25 was for the Department of Operation and Maintenance, and \$15,074.06 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material, amounted to \$29,874.80.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenues and expenditures for the month of May, 1931, as compared with May, 1930, with the figures for the first 11 months of the current fiscal year as compared with the same period in the fiscal year 1930.

It is impossible to submit figures for the month of June, 1931, at the time of writing this report, since all charges, etc., involved in the accounting have not been completed.

	May, 1930.	May, 1931.	To end of May.	
			Last year.	This year.
Tolls.....	\$2,163,009.90	\$1,923,496.88	\$24,976,009.19	\$22,823,113.91
Other receipts.....	440,996.58	298,788.25	4,140,550.75	3,819,447.74
Total transit revenues.....	2,604,006.48	2,222,285.13	29,116,559.94	26,642,561.65
Total transit expenses.....	1,209,253.85	1,107,108.63	12,299,156.87	12,809,274.00
Net transit revenues.....	1,394,752.63	1,115,176.50	16,817,403.07	13,833,287.65
Three per cent capital charge.....	621,966.53	626,591.52	6,835,046.44	6,887,160.47
Transit surplus.....	772,786.10	488,584.98	9,982,356.63	6,946,127.18
Business revenues.....	1,506,519.97	1,306,009.50	18,105,459.76	16,210,402.51
Business expenses.....	1,689,888.07	1,517,985.61	17,355,796.72	15,722,002.14
Net business revenues.....	(183,368.10)	(211,976.11)	749,663.04	488,400.37
Three per cent capital charge.....	64,131.07	66,112.77	731,085.50	757,745.15
Business surplus.....	(247,499.17)	(278,088.88)	18,577.54	(269,344.78)
Combined revenues.....	4,110,526.45	3,528,294.63	47,222,019.70	42,852,964.16
Combined expenses.....	2,899,141.92	2,625,094.24	29,654,953.59	28,531,276.14
Net revenues.....	1,211,384.53	903,200.39	17,567,066.11	14,321,688.02
Three per cent capital charge.....	686,097.60	692,704.29	7,566,131.94	7,644,905.62
Combined surplus.....	525,286.93	210,496.10	10,000,934.17	6,676,782.40

() Indicates deficit.

Respectfully,

H. BURGESS,
Governor.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT
BALBOA HEIGHTS, C. Z., July 16, 1931.

No. 912.

Central America, west coast, Guatemala, San Jose Light again normal. The following is quoted from Notice to Mariners No. 26, dated Washington, D. C., June 27, 1931:

The second officer of the British steamship *Narenta* reports that on the morning of May 6, and again on the evening of June 5, 1931, San Jose Light was observed to be showing its normal characteristic—occuluting white every 10 seconds, light 5 seconds, eclipse 5 seconds.
Approximate position, 13° 55' 12" N., 90° 49' 40" W.

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending July 18, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Feltre	Navigazione Libera-Triestina		July 12.		317
Balboa	Johnson S. S. Line		July 12.		146
Magdalena	Hamburg-American Line		July 12.		509
Theodore Roosevelt	Fred Olsen & Co.		July 12.		207
Chile	Danish-East Asiatic Line		July 12.		13
Lochgoil	Royal Mail Steam Packet Co.	July 12.	July 13.	185	23
Buenaventura	Panama R. R. S. S. Line		July 13.		42
Orbita	Pacific Steam Navigation Co.	July 13.	July 13.	36	6
Santa Teresa	Grace Line	July 13.	July 13.	225	250
President Wilson	Dollar Line	July 14.	July 14.	306	35
Camden	United Fruit Co.	July 14.	July 14.	5, 225	(¹)
Annie Johnson	Johnson S. S. Line	July 14.	July 14.	(¹)	180
Schwaben	North German Lloyd	July 14.	July 14.	2	(²)
Zacapa	United Fruit Co.	July 14.	July 15.	178	307
Crijnsen	Royal Netherlands S. S. Co.	July 14.	July 15.	70	5
Ruhr	Hamburg-American Line	July 15.	July 15.	36	5
Tela	United Fruit Co.	July 15.	July 15.	611	38
Kuma Maru	Nippon Yusen Kaisha	July 15.	July 15.	72	(²)
Moveria	Donaldson S. S. Line	July 15.	July 16.	(¹)	297
Pastores	United Fruit Co.	July 15.	July 16.	264	168
Bolivar	United Fruit Co.	July 16.	July 17.	14	1
Ancon	Panama R. R. S. S. Line	July 16.	July 16.	2, 233	
Westerwald	Hamburg-American Line	July 16.	July 17.	42	257
Daytonian	Leyland S. S. Line	July 16.	July 18.	628	1, 117
Arkansas	French Line	July 16.	July 18.	733	(²)
Caldas	National Navigation Co.		July 17.		66
Juan S. Eleano	Spanish Line	July 17.		244	
Cauca	National Navigation Co.	July 17.		284	
San Francisco	Hamburg-American Line	July 17.	July 17.	54	80
Tolosa	United Fruit Co.	July 17.	July 17.	130	45
Crijnsen	Royal Netherlands S. S. Co.	July 17.	July 18.	10	319
Atlantida	Standard Fruit and Steamship Co.	July 17.	July 18.	80	189
Hindanger	Westfal, Larsen & Co.	July 17.	July 18.	(¹)	99
Santa Inez	Grace Line	July 17.	July 18.	126	322
Venezuela	Panama Mail S. S. Co.	July 17.		218	
Acajutla	Pacific Steam Navigation Co.	July 18.		787	
Bodegraven	Royal Netherlands S. S. Co.	July 18.		131	
Holly wood	Charles R. McCormick	July 18.	July 18.	33	(²)
Cali	Roland Line	July 18.		850	
Durazzo	Hamburg-American Line		July 18.		136

¹ No cargo discharged.

² No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending July 18, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Santa Maria	Grace Line	July 10.	July 10.	132	5
City of Elwood	Roosevelt S. S. Co.	July 11.	July 12.	636	
Rakuyo Maru	Nippon Yusen Kaisha	July 11.	July 12.	90	
Santa Teresa	Grace Line	July 12.	July 13.	2	1
Kenowis	U. S. Government	July 14.	July 15.	1, 104	31
San Mateo	United Fruit Co.	July 15.	July 16.	308	22
Port Fairy	Commonwealth & Dominion Line	July 16.	July 17.	16	
Virginia	Panama-Pacific Line	July 17.	July 17.		176
Westerwald	Hamburg-American Line	July 17.	July 18.	177	

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, July 18, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Raynolds ²	11	16.50	12	6.10	12	13.55	12	14.50	Norwegian.	West Indian Trad. Co.	350.8	50.8	14.0	Gothenburg, Swed	Seattle, Wash.	Cement	1,054	4,957	3,633
Gertrude	12	2.55	12	7.30	12	14.31	12	15.34	American.	Kellogg S. S. Co	391.9	51.0	17.0	New Orleans, La.	Manila, P. I.	Ballast	5,393	3,716	
Chilo ²	11	23.45	12	10.58	12	17.50	12	19.18	Danish	East Asiatic Co.	425.0	55.0	19.3	Copenhagen, Den.	Yancover, B. C.	General	3,919	5,663	
Princeton	12	10.45	12	10.50	12	17.25	12	18.40	British	R. Chapman & Son	436.6	60.4	18.0	N. Shields, Eng.	Yancover, B. C.	Ballast	8,144	6,028	
Absoluta	12	11.05	12	11.40	12	18.46	12	19.53	American	McCormick S. S. Co.	409.6	54.1	20.0	Wilmington, Del.	Tacoma, Wash.	General	4,714	6,627	4,993
Santa Maria ²	11	13.55	13	6.00	13	13.14	13	14.35	American	Union Oil Co.	469.0	60.0	19.2	Cristobal, C. Z.	Los Angeles, Calif.	Ballast	8,746	5,725	
Loeving ²	12	13.35	13	6.05	13	14.01	13	15.45	British	Royal Mail S. S. P. Co.	485.3	62.3	20.8	Rotterdam, Holl'd	Yancover, B. C.	General	2,742	10,866	7,066
Harry G.	12	16.30	13	7.20	13	14.48	13	15.50	Danzig	Baltic-Am. Pet. Tr. Co.	503.0	68.0	21.0	Hamburg, Germany	Talara, Peru.	Ballast	11,646	7,653	
Steinvaentura.	11	19.10	13	11.50	13	18.23	13	19.30	American	Panama R. R. S. S. Line	551.0	43.0	17.8	New York, N. Y.	Guayaquil, Ecuador	General	501	2,373	1,776
S-14 ²	13	15.30	13	15.10	13	21.45	14	00.15	American	U. S. Navy	231.0	21.0	10.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast	9,607	6,551	
Western Sun ²	14	3.35	14	6.20	14	14.17	14	15.25	American	Sun Oil Co.	480.6	66.0	21.0	Marcus Hook, Pa.	Los Angeles, Calif.	Ballast	5,368	5,732	4,151
Point Chico.	14	3.35	14	6.20	14	14.17	14	15.25	American	Swayne & Hoyt	386.8	52.2	22.6	Houston, Tex.	Seattle, Wash.	(s)			
Lt. Col. H. C.	14	6.20	14	14.17					American	U. S. Army	98.0	22.0		Cristobal, C. Z.	Balboa, C. Z.	Towing barge.			
Yakima Star ²	14	00.05	14	12.05	14	19.28	14	22.28	German	Blue Star Line	460.0	60.0	18.0	Kiel, Germany	Yancover, B. C.	Ballast	7,368	6,183	4,343
San Manuel ²	15	22.25	15	6.15	15	13.38	15	15.40	British	Eagle Oil & Ship. Co.	407.0	53.0	25.6	Curacao, D. W. I.	Antofagasta, Chile.	(s)			
Harry	15	7.15	15	7.50	15	14.49	15	16.00	American	Lukenbach Line	448.9	60.2	22.0	Boston, Mass	Seattle, Wash.	General	3,000	9,262	6,853
Lukenbach.	15	6.40	15	13.10	15	20.40	15	22.55	French	Messageries Maritimes	351.0	52.5	23.1	Dunkerque, France.	Noumea, N. Caled	General	2,796		
Esperance.	15	12.25	15	12.45	15	18.50	15	20.00	American	Amer-Hawaiian Line	404.6	53.9	17.6	Boston, Mass	Seattle, Wash.	General	3,262	6,752	4,800
Oregonian.	15	14.05	15	14.25	15	21.29	15	22.55	British	R. Chapman & Son	412.6	55.0	17.6	Newcastle, Eng.	Yancover, B. C.	Ballast	6,811	4,810	
Koranton.	15	15.35	16	6.10	16	12.51	16	17.05	British	Alfred Holt & Co.	452.0	58.0	23.0	Philadelphia, Pa.	Shanghai, China.	General	4,791	8,640	5,294
Panichas ²	15	15.35	16	6.10	16	12.51	16	17.05	British	Alfred Holt & Co.	452.0	58.0	23.0	Philadelphia, Pa.	Shanghai, China.	General	4,791	8,640	5,294
Pacific	15	15.35	16	6.10	16	12.51	16	17.05	British	Alfred Holt & Co.	452.0	58.0	23.0	Philadelphia, Pa.	Shanghai, China.	General	4,791	8,640	5,294
Exporter ²	15	15.45	16	6.05	16	13.45	16	15.10	British	Furness, Withy & Co.	435.9	60.9	17.8	Glasgow, Scotland	Yancover, B. C.	General	553	9,633	6,968
Texmar	16	6.35	16	7.15	16	14.37	16	16.00	American	Calmar Line	410.5	54.3	20.1	Baltimore, Md	Seattle, Wash.	Steed, general	4,799	6,567	4,999
Sanjo Maru ²	16	8.45	16	8.50	16	15.15	16	16.10	Japanese	Osaka Shosen Kaisha	446.0	60.0	23.4	New York, N. Y.	Shanghai, China.	General	3,289	8,942	6,251
Rangitane	16	9.10	16	9.20	16	16.02	17	1.03	British	N. Z. Shipping Co.	531.0	70.0	27.0	London, England	Auckland, N. Z.	General	3,850	18,205	13,494
Janic Macrisk ²	16	11.20	16	11.30	16	18.30	16	20.00	Danish	Angle-Saxon Pet. Co.	415.8	59.7	18.6	Hamburg, Germany	Los Angeles, Calif.	Ballast	8,102	5,623	
Willapio	16	12.55	16	13.05	16	19.45	16	21.05	American	Williams S. S. Line	456.0	56.0	20.0	Baltimore, Md	Seattle, Wash.	General	3,431	7,731	5,805
Moveria ²	15	16.30	16	14.10	16	20.30	16	21.50	British	Donsdson Line	385.0	51.6	18.5	Glasgow, Scotland	Yancover, B. C.	General	1,329	6,576	4,724
President	16	15.10	17	6.00	17	13.05	17	14.20	American	Dollar Line	517.0	72.0	26.10	New York, N. Y.	San Francisco, Cal.	General	1,159	15,239	10,511
Pierce.	17	6.50	17	7.00	17	14.08	17	17.45	Swedish	Transatlantic S. S. Co.	448.0	58.0	19.6	Antwerp, Belgium	Seattle, Wash.	Gen., coke, sand.	4,507	8,274	6,190
Parrakoola ²	17	5.55	17	7.50	17	15.00	17	1.20	American	Panama-Pacific Line	586.4	80.3	27.8	New York, N. Y.	San Francisco, Cal.	General, paper	2,678	25,254	18,170
Virginia	17	7.20	17	7.25	17	16.41	17	17.45	American	Isthmian S. S. Lines	425.0	56.0	26.0	Mobile, Ala.	Seattle, Wash.	Steel	8,138	7,611	5,450
Knoxville City.	17	10.20	17	10.30	17	17.30	17	23.00	Swedish	Stockholms Rederi	378.0	51.0	16.10	Brevik, Norway	Corral, Chile.	Gen., fish hooks.	2,274	5,448	3,967
Sveajarl ²	17	10.20	17	10.30	17	17.30	17	23.00	Swedish	Stockholms Rederi	378.0	51.0	16.10	Brevik, Norway	Corral, Chile.	Gen., fish hooks.	2,274	5,448	3,967

¹ Tanker. ² Motor ship. ³ Submarine. ⁴ Tug. ⁵ General, pipe, and sulphur. ⁶ Gasoline and benzine.

Westerwald	16	9.20	17	13.10	17	20.40	18	14.00	German	Hamburg-American Line	391.8	50.4	15.7	Hamburg, Germany	Champerico, Guat.	1,649	5,621	3,948
Caldas	4	16.50	17	13.05	17	20.35	18	1.30	Colombian	National Navigation Co.	116.0	21.0	7.6	Cristobal, C. Z.	Buena Ventura, Col.	42	211	124
St. Michel	17	2.50	17	15.09	17	21.29			American	U. S. Army	437.0	58.0	23.6	Balboa, C. Z.	Balboa, C. Z.	230		
San Francisco	17	9.55	17	17.25	18	11.33	18	13.15	German	Hamburg-American Line	416.8	59.0	22.1	Vancouver, B. C.	Vancouver, B. C.	4,716	8,454	6,344
Texas	17	19.50	17	20.00	18	12.36	18	14.00	American	The Texas Co.	432.8	56.1	17.0	Providence, R. I.	Los Angeles, Calif.	2,000	7,782	4,830
Sacramento	17	2.30	18	6.15	18	13.05	18	14.35	American	Nelson Line	380.0	53.2	19.6	New York, N. Y.	Seattle, Wash.	2,000	9,453	4,222
Atlantic Maru.	18	2.50	18	6.55	18	14.10	18	15.35	Japanese	Kokusai Kaisha	385.0	53.0	20.2	Galveston, Tex.	Kobe, Japan	7,852	6,251	4,700
Prince	15	23.55	18	7.55	18	14.41	18	16.45	British	Prince Line, Ltd.	441.0	60.0	25.3	Baltimore, Md.	Manila, P. I.	5,094	9,240	6,152
Baron Carnegic	8	8.05	18	8.15	18	15.02	18	16.45	British	H. Heath & Sons	336.0	48.0	15.0	Charleston, S. C.	Arica, Chile	3,643	2,576	
Hollywood	18	1.40	18	9.15	18	17.30	18	18.40	American	McCormick S. Co.	370.0	54.0	18.11	Buenos Aires, Arg.	Los Angeles, Calif.	2,873	6,285	5,030
Durazo	17	15.55	18	10.10	18	16.16	19	1.05	American	Grace Line	426.8	53.0	20.1	New York, N. Y.	Valparaiso, Chile	1,405	6,256	4,016
Daiza	10	20.18	18	10.05	18	18.10	18	19.15	German	Hamburg-American Line	227.5	34.4	14.1	Cristobal, C. Z.	Guayaquil, Ecuador	136	1,633	1,041
Texas	18	11.55	18	12.00	18	18.50	18	19.50	American	Amer-Hawaiian Line	471.0	57.2	20.0	New York, N. Y.	Seattle, Wash.	3,125	6,154	4,966
Ruth Kellogg	18	12.10	18	12.55	18	20.30	18	21.40	American	Kellogg S. Corp.	300.0	54.2	18.0	Philadelphia, Pa.	Los Angeles, Calif.	1,665	6,205	4,284
Hudanger	17	7.55	18	13.30	18	21.12	18	22.45	Norwegian	Wadsworth & Co.	308.0	55.0	18.8	Buenos Aires, Arg.	Vancouver, B. C.	1,603	6,854	5,287
Sacramento	18	14.05	18	14.15	18	21.55			American	U. S. Navy	224.0	40.0	40.0	High seas.	Balboa, C. Z.			

7 Transport. 8 Gunboat.

* Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Britta	11	20.15	12	6.38	12	14.50	12	14.50	Norwegian	Caucasian Oil Co.	407.8	54.7	27.0	Los Angeles, Calif.	Lands End, Eng. ¹⁰	8,246	6,539	4,252
Lake Oswega	12	2.45	12	6.57	12	15.15	12	15.15	American	Ford Motor Co.	251.0	54.6	22.0	Seattle, Wash.	New York, N. Y.	3,020	2,739	1,600
Portmar	12	7.25	12	8.20	12	16.10	12	16.10	American	Calmar S. Corp.	409.8	54.2	26.0	Seattle, Wash.	Boston, Mass.	7,650	5,581	4,705
Hoffron	12	8.50	12	9.38	12	17.20	12	17.20	American	Weyerhaeuser Co.	440.0	56.0	27.0	Everett, Wash.	Portland, R. I.	9,855	9,319	6,097
Arizona	12	0.09	12	10.38	12	18.00	12	18.00	American	Amer-Hawaiian Line	434.3	57.7	25.0	Seattle, Wash.	Boston, Mass.	7,642	7,983	5,916
Point Gorda	12	10.45	12	11.15	12	18.45	12	18.45	American	Swayne & Hoyt	324.0	46.2	21.0	Portland, Ore.	New Orleans, La.	2,750	3,304	2,643
City of Elwood	11	6.20	12	15.19	12	22.25	12	22.25	American	Rosevelt S. Co.	395.6	55.0	27.0	Islip, P. I.	New York, N. Y.	7,665	7,344	5,283
Santa Teresa	12	16.30	13	6.43	13	13.45	13	13.45	American	Grace Line	390.2	51.6	24.0	Valparaiso, Chile.	New York, N. Y.	3,581	5,726	4,089
Pacific Fir	12	23.55	13	6.45	13	15.00	13	16.25	American	Dimon S. Corp.	410.5	54.0	25.0	Seattle, Wash.	Norfolk, Va.	7,772	6,624	4,833
Orbia	13	1.25	13	9.40	13	17.35	13	22.18	British	Pacific Steam Nav. Co.	560.3	67.5	30.0	Tatamano, Chile	London, England	6,106	16,844	11,731
El Cirvo	13	9.50	13	10.51	13	18.45	13	21.27	British	Anglo-Siam Oilfields	407.4	52.2	26.0	San Francisco, Cal.	Philadelphia, Pa.	7,940	6,046	4,326
Pennsylvania	13	9.55	14	6.10	14	14.25	14	14.55	American	Japan-Pacific Line	586.4	80.3	30.0	New York, N. Y.	Crute oil.	5,018	25,262	18,194
Annie Johnson	11	7.40	14	6.40	14	15.27	14	21.10	Swedish	Johnson Line	392.0	52.6	26.0	San Francisco, Cal.	Stockholm, Sweden	5,904	6,690	4,919
Schwaben	13	20.30	14	7.05	14	15.40	14	17.40	German	North German Lloyd	401.4	63.8	27.0	Vancouver, B. C.	Bremen, Germany	9,842	10,002	6,743
Ohion	14	4.00	14	7.43	14	16.10	14	15.10	American	Amer-Hawaiian Line	407.7	53.7	23.3	Portland, Ore.	Boston, Mass.	5,569	7,103	4,991
Lukenbach	14	5.00	14	8.09	14	17.20	14	17.20	American	Lukenbach Line	436.6	57.2	27.0	Seattle, Wash.	Boston, Mass.	7,839	8,543	6,427
Cardier	14	5.45	14	8.25	14	18.45	14	20.05	Belgian	Soc. Anonyme C.M.S.R.	490.4	60.8	25.0	New Westminster, B. C.	Antwerp, Belgium	9,912	9,264	7,044
Wilson	14	8.50	14	9.45	14	17.25	14	22.40	American	Dollar Line	516.5	72.2	31.0	Manila, P. I.	New York, N. Y.	6,285		
California	14	11.15	14	11.59	14	19.55	14	21.05	American	Standard Oil Co., Calif.	513.5	68.2	30.0	Los Angeles, Calif.	London, England	15,365	11,719	8,619
Standard	14	12.30	14	13.09	14	20.10	14	20.20	American	McCook Line	410.5	54.3	24.0	Portland, Ore.	Philadelphia, Pa.	6,968	6,573	4,916
San Simon	14	13.00	14	13.49	14	21.25	14	21.25	American	McCormick S. Co.	410.5	54.0	24.0	San Francisco, Cal.	Buenos Aires, Pa.	5,148	6,624	5,040
West Camargo	14	23.00	15	0.51	15	14.05	15	15.25	Japanese	Nippon Yusen Kaisha	405.0	53.0	28.0	Hilo, P. I.	Boston, Mass.	8,150		
Kuma Maru	15	8.15	15	7.33	15	14.05	15	22.30	German	Hamburg-American Line	494.0	58.3	24.5	Magalhães, Chile.	Hamburg, Germany	8,765		
Ruhr	15	8.30	15	9.48	15	17.25	15	22.35	Danish	East Asiatic Co.	465.4	62.2	28.0	Vancouver, B. C.	Copenhagen, Den.	9,206	11,226	8,275
Europa	14	5.15	15	9.30	15	18.20	15	22.35	American	U. S. Army	390.0	54.2	18.3	San Francisco, Cal.	Brooklyn, N. Y.	8,765		
Kenowis	14	9.00	15	10.10	15	18.20	15	22.35	American	Standard Oil Co., N. Y.	468.3	62.7	28.0	Los Angeles, Calif.	Boston, Mass.	12,264	10,084	7,388
China Arrow	15	11.55	15	12.38	15	20.35	15	20.35	American	Standard Oil Co., N. Y.	468.3	62.7	28.0	Los Angeles, Calif.	Boston, Mass.	12,264	10,084	7,388

¹⁰ Motor ship. ¹¹ Lumber and automobile parts. ¹² Barley, fruit, and general.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Planter	15	12.50	15	13.34	15	21.30	16	3.05	British.	Harrison Line.	420.0	54.5	24.0	N. Westminster, B. C.	London, England.	General.	7,698	6,558	4,621
Fresno City ¹¹	15	14.05	15	14.45	15	21.45	15	21.45	British.	Rearson Smith Line.	415.6	55.5	25.0	Vlad'vok, U.S.S.R.	United Kingdom	General	7,000	7,169	5,408
Lancaster	15	13.45	16	6.16	16	14.15	16	14.15	American.	Argonaut S. S. Line.	431.0	57.7	26.1	Hilo, T. H.	New Orleans, La.	Sugar	9,319	7,935	5,841
Naborton	16	1.00	16	6.54	16	15.10	16	15.10	British.	R. Dale & Co.	412.6	55.5	28.1	Vancouver, B. C.	London, England.	Wheat, general.	9,784	6,233	4,797
Earls Park	16	5.45	16	7.22	16	16.10	16	16.20	British.	J. & J. Denholm.	404.8	53.0	25.0	Antofagasta, Chile.	Nitrates	7,930	5,733	4,120	
Prims	15	19.30	16	7.52	16	17.30	16	18.55	British.	Howard Tenness, Ltd.	411.8	55.4	25.0	Tocopilla, Chile.	Nitrates	8,580	7,080	5,227	
Therton	16	7.15	16	8.26	16	17.55	16	17.55	British.	R. Chapman & Son.	408.0	52.4	24.5	Vancouver, B. C.	London, England.	Wheat, oats, gen.	7,504	5,939	4,126
Arkansas	16	8.00	16	9.07	16	19.10	18	10.25	French.	French Line.	465.0	53.4	27.2	Valparaiso, Chile.	Haifa, France.	General.	9,800	7,822	5,985
Incahite ¹	16	14.25	16	16.19	17	12.30	17	12.30	British.	Imperial Oil Co.	350.3	48.5	26.10	Callao, Peru	Crude oil.	5,800	4,447	3,183	
Calgarolite ^{1 13}	16	23.00	17	6.21	17	13.45	17	14.45	British.	Imperial Oil Co.	521.0	70.4	31.0	Talara, Peru.	Crude oil.	16,500	13,339	7,717	
Port Fairy ¹³	16	15.00	17	6.34	17	14.05	17	14.05	British.	Com'lb & Donn. Line.	477.3	63.2	23.5	Pt. Chalmers, N. Z.	London, England.	Frozen, general.	4,960	10,973	7,757
Minnesota	17	4.10	17	7.43	17	15.05	17	15.05	American.	Amer-Hawaiian Line.	407.7	53.7	24.4	Pt. Town 'd, Wash.	Boston, Mass.	General.	6,334	7,150	5,024
Westmoreland.	17	6.30	17	8.00	17	16.10	17	16.10	British.	Federal Steam Nav. Co.	473.0	60.1	23.0	Oamaru, N. Z.	Glasgow, Scotland.	Frozen, general.	4,242	10,423	7,456
Pacific																			
Trader ¹²	16	22.40	17	8.29	17	16.55	19	18.15	British.	Furness, Withy & Co.	420.0	58.0	25.0	Vancouver, B. C.	London, England.	General.	7,332	7,979	5,916
Cauca ¹³	17	10.20	17	11.04	17	18.10			Colombian.	National Navigation Co.	107.4	22.9	11.3	Buenaventura, Col.	Cristobal, C. Z.	Coffee, platinum.	283	262	161
Ferglen ¹³	17	11.55	17	12.29	17	19.20	17	20.45	Norwegian.	Fern Line.	385.3	54.6	26.3	Vlad'vok, U.S.S.R.	Stettin, Germany.	Soya beans	7,625	6,615	4,859
J. W.																			
Van Dyke ¹³	17	17.35	18	5.55	18	13.55	18	13.55	American.	J. B. Berry Sons & Co.	365.0	50.9	24.3	Los Angeles, Calif.	Tiverton, R. I.	Gasoline	6,599	5,174	3,528
Betterton ¹	17	17.45	18	7.00	18	15.10	18	15.10	American.	Shell Eastern Prod. Co.	431.0	59.2	28.0	San Francisco, Calif.	Swartzen, N. J.	Gasoline	7,743	7,863	5,104
Sulairia	17	19.50	18	7.19	18	17.30	18	17.30	British.	Donaldson Line.	425.0	56.0	27.0	Vancouver, B. C.	Glasgow, Scotland.	General.	7,584		
Acajuta	18	00.20	18	7.51	18	17.55			British.	Pacific Steam Nav. Co.	215.7	33.5	16.0	Champerico, Guat.	Cristobal, C. Z.	General.	7,871	1,273	706
Cayana ¹	18	7.57	18	8.57	18	19.10	20	10.30	American.	U. S. Navy.	455.0	56.0	29.0	Los Angeles, Calif.	Cristobal, C. Z.	General	7,425		
Oakmar	18	13.30	18	14.13	18	22.00	18	22.00	American.	Calmar S. S. Corp.	384.4	51.2	25.0	Seattle, Wash.	New York, N. Y.	Lumber	6,162	6,327	4,432
Chateau																			
Thierry	18	14.15	18	14.56	18	21.30	19	10.14	American.	U. S. Army.	448.0	58.2	24.0	Honolulu, T. H.	New York, N. Y.	Army stores.	324		
Call.	18	14.25	18	16.33	18	23.35			German.	Roland Line.	516.5	32.9	15.0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	850		698
Amerkaland ¹³	18	16.20	18	17.14	19	14.40	19	14.40	Swedish.	Oru S. S. Corp.	261.0	72.0	34.0	Cruz Grande, Chile	New York, N. Y.	Iron ore.	21,650	15,560	4,496
Baron Ramsay	18	19.00	18	19.54	19	13.10	19	13.10	British.	H. Hogarth & Sons	350.0	50.2	22.0	Talal, Chile	Azores ¹⁴	Nitrates	5,775	4,297	3,051

¹ Tanker. ¹³ Motor ship. ¹⁴ For orders. ¹⁵ Cedar wood and soya beans. ¹⁶ Fuel oil, gasoline, and lubricating oil.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
July 14.	Camden.	United Fruit Co.	Curacao, D. W. I.	July 12.	No. 144-M ¹⁷ .	Pan American-Grace Airways.	Pimental via waypoints.
July 14.	Zacapa.	United Fruit Co.	Cartagena, Colombia.	July 12.	No. 968-M ¹⁷ .	Pan American Airways.	San Salvador via waypoints.
July 14.	Crynsen.	Royal Netherlands S. S. Co.	Antsterdam via waypoints.	July 12.	No. 698-M ¹⁷ .	Pan American Airways.	Miami via waypoints.
July 14.	No. 144-M ¹⁷ .	Pan American-Grace Airways.	Pimental via waypoints.	July 12.	Magdalena.	Hamburg-American Line.	Hamburg via waypoints.
July 14.	Anachucuna ¹⁸ .	A. Tagaropoulos.	Colon, Rep. of Panama.	July 14.	Anachucuna ¹⁸ .	A. Tagaropoulos.	Colon, Rep. of Panama.
July 14.	Inapaquina ¹⁸ .	A. Tagaropoulos.	Colon, Rep. of Panama.	July 14.	Inapaquina ¹⁸ .	A. Tagaropoulos.	Colon, Rep. of Panama.
July 15.	Pastores.	United Fruit Co.	New York via Kingston.	July 14.	Camden.	United Fruit Co.	Curacao and waypoints.
July 15.	Tela.	United Fruit Co.	New Orleans, La.	July 15.	No. 9684 ¹⁷ .	Pan American Airways.	San Salvador and waypoints.
July 15.	No. 699-M ¹⁷ .	Pan American Airways.	Miami via waypoints.	July 15.	No. 699-M ¹⁷ .	Pan American Airways.	Miami via waypoints.
July 15.	No. 9088 ¹⁷ .	Pan American Airways.	San Salvador and waypoints.	July 15.	Zacapa.	United Fruit Co.	New York via waypoints.
July 16.	Ancon.	Panama Railroad S. S. Line.	New York via Haiti.	July 15.	Crynsen.	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
July 16.	Bolivar.	Colombian S. S. Line.	Liverpool via waypoints.	July 16.	Tela.	United Fruit Co.	Port Limon, Costa Rica.
July 17.	Tolosa.	United Fruit Co.	New York via waypoints.	July 16.	Pastores.	United Fruit Co.	Pimental via waypoints.
July 17.	Carare.	Elders & Wyffes.	Avonmouth via waypoints.	July 17.	Bolivar.	Colombian S. S. Line.	Colombian ports.
July 17.	Atlantida.	Standard Fruit & S. S. Co.	New Orleans and Habana.	July 17.	Carare.	Elders & Wyffes.	Avonmouth via waypoints.
July 17.	Crynsen.	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	July 17.	Tolosa.	United Fruit Co.	New York via waypoints.
July 17.	Juan Sebastian Elcano.	P. W. Hamilton.	Barcelona via waypoints.	July 18.	Atlantida.	Standard Fruit and S. S. Co.	New Orleans via waypoints.
July 17.	Annetta I. ¹⁸ .	Spanish S. S. Line.	Colon, Rep. of Panama.	July 18.	Carmelia ¹⁹ .	Crynsen.	Colon, Rep. of Panama.
July 18.	Carmelia ¹⁹ .	Standard Fruit and S. S. Co.	Colon, Rep. of Panama.	July 18.	Daytonian.	Leyland S. S. Line.	Amsterdam via waypoints.
July 18.	No. 9670 ¹⁷ .	Pan American Airways.	San Salvador and waypoints.	July 18.	No. 300-M ¹⁷ .	Pan American-Grace Airways.	Liverpool via Curacao.
July 18.	No. 300-M ¹⁷ .	Pan American-Grace Airways.	Pimental via waypoints.				

PORT OF BALBOA

July 11.	Rakuyo Maru.	Nippon Yusen Kaisha.	Hongkong, China.	July 12.	Rakuyo Maru.	Nippon Yusen Kaisha.	Valparaiso, Chile.
July 15.	San Mateo.	United Fruit Co.	San Francisco, Calif.	July 14.	Nueva Panama ²⁰ .	Haus Elliott.	Panama Bay, R. P.
July 17.	A. B. De Obarrio ¹⁹ .	Panama Bay, R. P.	Panama Bay, R. P.	July 16.	San Mateo.	United Fruit Co.	San Francisco, Calif.
July 17.	Des Hermanos ¹⁹ .	A. Valdez.	Panama Bay, R. P.	July 17.	A. B. De Obarrio ¹⁹ .	A. Valdez.	Panama Bay, R. P.
July 17.	Nueva Panama ²⁰ .	Haus Elliott.	Panama Bay, R. P.	July 17.	Des Hermanos ¹⁹ .	Des Hermanos ¹⁹ .	Panama Bay, R. P.
July 17.	Real ¹⁹ .	Haus Elliott.	Panama Bay, R. P.	July 17.	Nueva Panama ²⁰ .	Nueva Panama ²⁰ .	Panama Bay, R. P.
July 17.				July 17.	Real ¹⁹ .	Real ¹⁹ .	Panama Bay, R. P.

¹⁷ Air mail carrier. ¹⁸ Motor boat. ¹⁹ Motor schooner. ²⁰ Motor ship.

* Other than ships passing through the Canal.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices, including the 25 per cent surcharge, to individuals and companies, effective July 21, 1931.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.24
Bronze, Tobin, average.....	Lb.	.24
Gasoline, motor grade.....	Gal.	.105
Metal, yellow.....	Lb.	.23
Oakum, Navy, spun.....	Lb.	.16
Oakum, Navy, unspun.....	Lb.	.15
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.23
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.33
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.45
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.38
Oil, kerosene, in drums.....	Gal.	.07
Oil, marine engine.....	Gal.	.49
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.11
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.11
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.13
Waste, cotton, white.....	Lb.	.15

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships bunkers. Oil can be delivered as fast as the ships can take it, from ample stocks at both ends of the Canal. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 15 years of operation.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1 per barrel at Balboa and 95 cents and \$1 at Cristobal; Diesel oil \$1.45 per barrel at Balboa and Cristobal.

Coal, bunker, Navy Standard, is supplied to steamships including warships of all nations, trimmed in bunkers at \$7.25 at Cristobal and \$10.25 at Balboa per ton of 2,240 pounds. Extra charges are made in accordance with a published tariff for special trimming at the request of the officers of the ship, for galley, lump, or run-of-mine coal in sacks, and for delivery, when coal is furnished from lighters or launches away from the coaling piers.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hind-quarters selling at 14½ cents per pound and forequarters at 12 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., July 29, 1931. No. 52.

Tanker Traffic Through the Panama Canal During Fiscal Year 1931.

During the fiscal year ended June 30, 1931, 944 tank ships transited the Canal, carrying 5,102,836 tons of cargo, principally mineral oil products. These vessels had a total net tonnage of 5,284,873 tons, and paid \$4,682,320.14 in tolls.

Tank ships comprised 17.1 per cent of the total commercial transits; made up 19.0 per cent of the net tonnage (Panama Canal measurement); paid 19.0 per cent of the total tolls collected; and carried 20.3 per cent of the total cargo in transit through the Canal.

Tanker traffic for the past year was the lowest since the fiscal year 1923, which was the beginning on a large scale of shipments of this commodity from the California fields. Shipments of mineral oils via the Canal have shown a gradual reduction since the beginning of the year (as will be noted in a table in another part of this statement showing traffic month by month), dropping to the low mark of 49 transits in June, 1931. These reduced shipments are no doubt due to the reported curtailed output in the California fields.

With respect to its proportion to the total traffic, tanker traffic was lower than the fiscal year 1930, except for cargo which was approximately the same. In comparison with the fiscal year 1929, a relative increase was shown in transits and cargo, while the percentages of the tolls collected were approximately the same. The Panama Canal net tonnage of the 1931 tanker traffic was slightly under the net tonnage of 1929.

Expressed in terms of percentage, the following tabulation shows the proportion of tanker traffic through the Canal in the past 5 years:

Fiscal year.	Per cent of total traffic.			
	No. of transits.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
1931.....	17.1	19.0	19.0	20.3
1930.....	19.7	21.9	21.3	20.2
1929.....	16.8	19.6	18.9	17.9
1928.....	17.3	21.2	20.1	19.7
1927.....	24.2	29.1	27.4	26.1

The number and aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the fiscal year 1931, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the preceding 4 fiscal years:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
Belgian.....	4	20,338	\$23,316.25	33,477
British.....	194	1,018,644	933,245.31	1,064,103
Danish.....	9	48,137	43,597.11	54,571
Danzig.....	27	184,928	165,459.25	185,982
Dutch.....	3	12,742	11,790.74	14,745
French.....	17	89,381	83,926.83	90,053
German.....	16	65,414	58,295.39	60,916
Italian.....	2	8,640	7,736.65	7,292
Norwegian.....	93	500,553	442,471.24	453,040
Panamanian.....	2	13,100	11,850.50	12,817
Swedish.....	4	27,592	21,820.09	12,132
United States.....	573	3,295,404	2,878,810.78	3,113,708
Total, fiscal year, 1931.....	944	5,284,873	4,682,320.14	5,102,836
Total, fiscal year, 1930.....	1,218	6,564,138	5,768,963.28	6,071,378
Total, fiscal year, 1929.....	1,083	5,844,263	5,145,632.19	5,512,481
Total, fiscal year, 1928.....	1,121	6,243,969	5,436,437.16	5,829,722
Total, fiscal year, 1927.....	1,324	7,624,112	6,658,806.90	7,250,579

The number of tank ships passing through the Canal each month during the fiscal year ended June 30, 1931, the tons of cargo carried, and the percentage of which the tanker traffic formed of transits, net tonnage, tolls, and cargo, are summarized in the following table:

Month.	Tanker traffic.		Percentage which tanker traffic formed of—			
	Transits.	Tons of cargo.	Transits.	Panama Canal net tonnage.	Tolls collected.	Cargo.
1930.						
July.....	120	688,237	24.6	26.9	27.0	28.7
August.....	95	490,437	20.4	22.4	22.2	22.8
September.....	94	466,264	20.5	23.0	22.7	22.6
October.....	93	493,146	18.0	20.5	20.4	20.6
November.....	83	441,841	17.3	19.3	19.2	19.5
December.....	77	418,138	15.6	17.5	17.3	19.3
1931.						
January.....	78	473,266	16.4	17.8	18.6	22.5
February.....	60	301,655	13.9	15.7	15.4	15.6
March.....	65	302,793	14.8	16.4	15.9	15.8
April.....	69	419,797	15.2	17.6	18.1	20.9
May.....	61	330,034	14.3	15.7	15.8	17.1
June.....	49	277,228	12.3	13.7	13.8	15.8
Total.....	944	5,102,836	17.1	19.0	19.0	20.3

Transits per month of tankers ranged from a maximum of 120 (July, 1930), to a minimum of 49 (June, 1931). Cargo carried in tankers varied from 688,237 tons (July, 1930) to 277,228 tons (June, 1931). Tanker traffic in June, 1931, was the lowest since the beginning of the heavy California shipments in 1922. The average per month for the past year was 78.7 transits and 425,236 tons of cargo, as compared with 101.5 transits and 505,948 cargo tons for the previous fiscal year.

Of the 5,102,836 tons of tanker cargo passing through the Canal during 1931, 218,723 tons were from the Atlantic to the Pacific and 4,884,113 tons from the Pacific to the Atlantic. The 218,723 tons from the Atlantic included 31,542 tons of creosote—21,842 tons from Europe to the United States; 5,200 tons from Europe to Canada; and 4,500 tons from the east coast of Canada to the west coast of Canada. The balance of the westbound tanker cargo—187,181 tons—consisting of mineral oils, came from the United States, Mexico, and West Indies, and was destined to the United States, Far East, South America, and Balboa, Canal Zone.

In the 4,884,113 tons of tanker cargo originating in the Pacific areas, there were included 45,911 tons of coconut oil and 12,652 tons of molasses from the Philippine Islands to the United States; 30,815 tons of molasses from the Hawaiian Islands to the United States; 12,600 tons of molasses from the Hawaiian Islands to Europe; and 19,000 tons of whale oil from Australasia to the United States. Mineral oils from the Pacific aggregated 4,763,135 tons, approximately 81 per cent of which originated in California and 19 per cent in Peru and Ecuador. This oil tonnage was destined as follows: 63.6 per cent to the United States; 24.1 per cent to Europe; 7.7 per cent to Canada; and the balance, 4.6 per cent, to the West Indies, Cristobal, and South America.

Of the mineral oil carried in tankers through the Canal during the fiscal year 1931, approximately 70 per cent was gasoline, benzine, or naphtha; 15 per cent crude oil; 13 per cent gas and fuel oils; and the remaining 2 per cent lubricating oils or kerosene.

"Tusitala" Towed into Cristobal.

The square-rigged sailing vessel *Tusitala*, owned by James A. Farrell, president of the United States Steel Corporation, arrived at Cristobal on the afternoon of July 21 in tow of the Panama Canal tug *Favorite*, which had gone to the aid of the square-rigger when she had become becalmed when some 50 miles out from Cristobal. The vessel, which was en route from New York to Honolulu with a cargo of sulphate of ammonia, left New York on June 28.

The *Tusitala* is a frequent visitor at the Canal having made 15 transits. The last previous passage occurred on March 13, 1931, when she was en route from Honolulu to New York with a cargo of 2,380 tons of sugar.

The *Tusitala* is 260 feet long, 39 feet beam, and of 1,748 gross tons. Built in Greenock, Scotland, in 1883, she is said to be the only remaining vessel of her type sailing the seas to-day flying the American flag in active overseas commercial pursuits.

Except for an occasional visit of the *Tusitala*, very few sailing vessels have applied for transit of the Canal in recent years. In the early years of the Canal, however, particularly during the World War, passages of sailing vessels were more frequent, principally in the nitrate trade. The peak year for sailing traffic was 1918, when there were 73 transits, 55 of which vessels flew the French flag.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 22, 1931.

No. 913.

Colombia, Cartagena Harbor entrance, Boca Chica channel buoy established. The following is quoted from Notice to Mariners No. 27, dated Washington, D. C., July 4, 1931:

The master of the American steamship *El Salvador* reports that a buoy has been established on the western extremity of the shoals eastward of Fort San Fernando, on the northern side of Boca Chica channel, in latitude 10° 19' 15" N., longitude 75° 33' 55" W.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, July 25, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tonn.	Gross.	Net.
Venezuela	17	20	19	6	05	19	12	35	20	Panama Mail S. S. Co.	380.0	48.7	23.9	New York, N. Y.	San Francisco, Cal.	General	2,742	6,033	4,353
Chinese Prince	18	30	19	6	10	19	13	35	19	Ping Line, Ltd.	441.0	67.0	21.6	New York, N. Y.	Manila, P. I.	General	3,641	9,254	6,265
Narragansett	18	20	19	6	50	19	13	51	19	Angle-American Oil Co.	435.0	60.0	22.5	Ellesmere Pt., Eng.	Los Angeles, Calif.	Ballast	.....	7,020	5,051
Sun	18	23	19	7	10	19	14	31	19	Sun Oil Co.	480.6	60.0	23.0	Chester, Pa.	Los Angeles, Calif.	Ballast	.....	9,620	6,476
Livingston	19	4	25	19	8	40	19	15	41	Shell Union Oil Co.	462.0	60.0	18.0	New York, N. Y.	Los Angeles, Calif.	Ballast	.....	8,491	6,065
Roe	19	7	12	19	9	50	19	16	21	Isbrandt Moller Co.	437.0	54.6	23.4	New York, N. Y.	Saigon, China	General	6,488	7,410	5,223
Niel Maersk	18	21	19	11	30	19	18	01	19	Royal Ned. S. S. Co.	390.0	58.0	20.6	New York, N. Y.	Corral, Chile	General	1,200	7,834	6,018
Bodegway	19	7	10	19	12	20	19	19	39	Bernth Lembock & Co.	400.0	54.2	24.3	Hamburg, Germany	Long Beach, Calif.	General	5,126	6,205	4,339
Manataway	19	7	10	19	13	40	19	21	45	Isthmian S. S. Lines	440.0	56.0	22.0	Baltimore, Md.	Seattle, Wash.	General	6,131	8,310	6,005
Hanley	18	19	10	10	30	20	17	35	20	U. S. Navy	455.0	56.0	19.8	Baltimore, Md.	Seattle, Wash.	General	.....	.....	.....
Cuyama	18	19	10	10	30	20	17	35	20	U. S. Navy	455.0	56.0	19.8	Baltimore, Md.	Seattle, Wash.	General	.....	.....	.....
Herauger	19	12	15	20	10	55	20	19	45	Interocean S. S. Co.	415.0	54.4	16.6	Rotterdam, Holl'd.	Los Angeles, Calif.	Bananas	105	6,854	5,360
San Marcos	20	16	00	21	6	10	21	13	22	Quaker Line	410.0	54.0	19.6	Philadelphia, Pa.	Seattle, Wash.	General	3,494	6,745	4,895
San Marcos	20	16	00	21	6	10	21	13	22	Quaker Line	410.0	54.0	19.6	Philadelphia, Pa.	Seattle, Wash.	General	3,494	6,745	4,895
Tidewater	21	10	45	21	11	00	21	17	45	Tidewater Oil Co.	481.0	66.0	26.0	New York, N. Y.	San Francisco, Cal.	Ballast	3,012	9,742	6,375
Tidewater	21	10	45	21	11	00	21	17	45	Tidewater Oil Co.	481.0	66.0	26.0	New York, N. Y.	San Francisco, Cal.	Ballast	3,012	9,742	6,375
City of Manila	21	11	35	21	11	45	21	19	38	Hall Line, Ltd.	475.0	58.2	23.0	New York, N. Y.	Fremanale, Aust'lia	General	.....	.....	.....
City of Manila	21	11	35	21	11	45	21	19	38	Hall Line, Ltd.	475.0	58.2	23.0	New York, N. Y.	Fremanale, Aust'lia	General	.....	.....	.....
Pacific Cedar	21	12	45	21	12	55	21	20	04	Dimon S. S. Corp.	399.0	54.7	20.6	Norfolk, Va.	Seattle, Wash.	General	3,237	6,138	4,354
Christiana	21	16	00	21	16	20	21	23	35	Ellerman Lines, Ltd.	380.0	53.0	22.6	New York, N. Y.	Townsville, Aus'lia	General	3,525	6,440	4,822
Christiana	21	16	00	21	16	20	21	23	35	Ellerman Lines, Ltd.	380.0	53.0	22.6	New York, N. Y.	Townsville, Aus'lia	General	3,525	6,440	4,822
Hawaiian	21	19	45	21	20	20	22	9	04	Amer-Hawaiian Line	404.0	53.0	18.0	Boston, Mass.	San Francisco, Cal.	General	2,404	6,506	4,707
Hawaiian	21	19	45	21	20	20	22	9	04	Amer-Hawaiian Line	404.0	53.0	18.0	Boston, Mass.	San Francisco, Cal.	General	2,404	6,506	4,707
New York	22	3	50	22	6	25	22	13	55	The Texas Co.	416.0	56.0	20.6	Providence, R. I.	Los Angeles, Calif.	Ballast	.....	6,373	4,841
New York	22	3	50	22	6	25	22	13	55	The Texas Co.	416.0	56.0	20.6	Providence, R. I.	Los Angeles, Calif.	Ballast	.....	6,373	4,841
Tusitala	21	14	00	22	6	25	22	15	10	Norton, Lilly & Co.	261.0	39.0	20.10	New York, N. Y.	Honolulu, T. H.	Sulf' ammonia	2,665	1,802	1,046
Tusitala	21	14	00	22	6	25	22	15	10	Norton, Lilly & Co.	261.0	39.0	20.10	New York, N. Y.	Honolulu, T. H.	Sulf' ammonia	2,665	1,802	1,046
T. J. Williams	22	2	30	22	8	05	22	15	22	Standard Shipping Co.	465.4	60.2	19.6	Philadelphia, Pa.	Los Angeles, Calif.	Ballast	.....	8,585	6,087
T. J. Williams	22	2	30	22	8	05	22	15	22	Standard Shipping Co.	465.4	60.2	19.6	Philadelphia, Pa.	Los Angeles, Calif.	Ballast	.....	8,585	6,087
Robert	22	10	15	22	10	55	22	17	36	Luckenbach Line	445.0	58.0	17.0	Boston, Mass.	Portland, Oreg.	General	3,194	8,695	6,375
Robert	22	10	15	22	10	55	22	17	36	Luckenbach Line	445.0	58.0	17.0	Boston, Mass.	Portland, Oreg.	General	3,194	8,695	6,375
Luckenbach	22	10	15	22	10	55	22	17	36	Luckenbach Line	445.0	58.0	17.0	Boston, Mass.	Portland, Oreg.	General	3,194	8,695	6,375
Luckenbach	22	10	15	22	10	55	22	17	36	Luckenbach Line	445.0	58.0	17.0	Boston, Mass.	Portland, Oreg.	General	3,194	8,695	6,375
Knut Hamsbuh.	22	11	15	22	13	45	22	18	18	Inter. Freightng Co.	410.0	54.0	17.0	Newport News, Va.	Talcahuano, Chile	General	1,487	6,311	4,704
Knut Hamsbuh.	22	11	15	22	13	45	22	18	18	Inter. Freightng Co.	410.0	54.0	17.0	Newport News, Va.	Talcahuano, Chile	General	1,487	6,311	4,704
Marian Odis	22	16	05	22	16	10	22	23	19	Arrow Line	409.6	54.1	19.0	Baltimore, Md.	Los Angeles, Calif.	General	3,000	6,653	4,863
Marian Odis	22	16	05	22	16	10	22	23	19	Arrow Line	409.6	54.1	19.0	Baltimore, Md.	Los Angeles, Calif.	General	3,000	6,653	4,863
Chandler	22	16	05	22	16	10	22	23	30	Canadian Government	321.0	32.9	13.6	Halifax, N. S.	Esquimalt, B. C.	Ballast	.....	255	129
Chandler	22	16	05	22	16	10	22	23	30	Canadian Government	321.0	32.9	13.6	Halifax, N. S.	Esquimalt, B. C.	Ballast	.....	255	129
Skeena	21	19	40	23	6	00	23	18	15	H. S. Bissel	110.0	26.0	16.0	Savannah, Ga.	Los Angeles, Calif.	General	1,526	4,791	3,392
Skeena	21	19	40	23	6	00	23	18	15	H. S. Bissel	110.0	26.0	16.0	Savannah, Ga.	Los Angeles, Calif.	General	1,526	4,791	3,392
Mary Pinchot	21	18	04	23	6	00	23	13	18	North German Lloyd	378.0	51.0	18.7	Hamburg, Germany	Valparaiso, Chile	General	4,627	6,903	5,185
Mary Pinchot	21	18	04	23	6	00	23	13	18	North German Lloyd	378.0	51.0	18.7	Hamburg, Germany	Valparaiso, Chile	General	4,627	6,903	5,185
Alda	22	3	35	23	7	10	23	14	25	Anderson Clayton Co.	400.8	53.0	19.9	Mobile, Ala.	Shanghai, China	Cotton	2,760	6,242	4,471
Alda	22	3	35	23	7	10	23	14	25	Anderson Clayton Co.	400.8	53.0	19.9	Mobile, Ala.	Shanghai, China	Cotton	2,760	6,242	4,471
Titanium	22	7	45	23	8	50	23	23	55	Salmar S. S. Corp.	377.0	51.0	19.0	Baltimore, Md.	Seattle, Wash.	Steel, general	5,661	10,973	7,848
Titanium	22	7	45	23	8	50	23	23	55	Salmar S. S. Corp.	377.0	51.0	19.0	Baltimore, Md.	Seattle, Wash.	Steel, general	5,661	10,973	7,848
Massar	23	8	50	23	9	20	23	16	26	Glasgow, Scotland	455.0	63.0	30.5	New York, N. Y.	N. Plymouth, N. Z.	General	4,216	9,576	6,673
Massar	23	8	50	23	9	20	23	16	26	Glasgow, Scotland	455.0	63.0	30.5	New York, N. Y.	N. Plymouth, N. Z.	General	4,216	9,576	6,673
Herminius	23	12	55	23	13	05	23	23	05	North German Lloyd	495.0	61.9	21.1	Bremen, Germany	Shanghai, China	General	2,436	9,965	6,656
Herminius	23	12	55	23	13	05	23	23	05	North German Lloyd	495.0	61.9	21.1	Bremen, Germany	Shanghai, China	General	2,436	9,965	6,656
Silversandala	22	17	40	23	14	05	23	21	42	W. K. Vanderbilt	240.0	46.2	24.7	Miami, Fla.	Vancouver, B. C.	General	.....	.....	.....
Silversandala	22	17	40	23	14	05	23	21	42	W. K. Vanderbilt	240.0	46.2	24.7	Miami, Fla.	Vancouver, B. C.	General	.....	.....	.....
Este	23	6	15	24	6	05	24	13	48	U. S. Army	448.0	58.0	24.7	New York, N. Y.	San Francisco, Cal.	Ballast	195	2,563	1,310
Este	23	6	15	24	6	05	24	13	48	U. S. Army	448.0	58.0	24.7	New York, N. Y.	San Francisco, Cal.	Ballast	195	2,563	1,310
Alma	23	6	15	24	6	10	24	13	48	Grace Line	466.0	64.0	23.0	New York, N. Y.	Talcahuano, Chile	General	1,950	10,687	6,633
Alma	23	6	15	24	6	10	24	13	48	Grace Line	466.0	64.0	23.0	New York, N. Y.	Talcahuano, Chile	General	1,950	10,687	6,633
Santa Barbara	23	14	05	24	6	10	24	13	48	Grace Line	466.0	64.0	23.0	New York, N. Y.	Talcahuano, Chile	General	1,950	10,687	6,633
Santa Barbara	23	14	05	24	6	10	24	13	48	Grace Line	466.0	64.0	23.0	New York, N. Y.	Talcahuano, Chile	General	1,950	10,687	6,633

⁶ Transport.

³ Yacht.

⁴ Destroyer.

⁵ Sailing ship.

¹ Motor ship.

² Tanker.

President Hayes	24	5.55	19	7.25	24	14.28	24	21.30	American.	522.0	63.0	24.0	New York, N. Y.	Round the world.	General.	3,737.12,023	8,443
Langer 1, 2	23	22.20	24	7.30	24	14.56	24	16.00	Norwegian.	473.5	64.5	20.8	Thameshaven Eng.	Los Angeles, Calif.	Ballast.	9,626	6,839
F. J.	24	00.50	24	8.30	24	15.35	24	17.05	American.	446.0	56.0	17.3	Houston, Tex.	Seattle, Wash.	General.	4,300	8,508
Luckenbach.	24	2.30	24	8.35	24	17.31	24	19.15	American.	261.0	42.6	20.0	Chester, Pa.	Seattle, Wash.	Auto parts.	1,753	2,758
Lake Ormeo 2.	23	1.30	24	9.04	24	16.54	24	16.55	American.	337.0	41.9	17.10	Cristobal, C. Z.	San Francisco, Cal.	Ballast.	3,667	2,329
Suriname.	23	2.30	24	9.04	24	16.54	24	16.55	American.	337.0	41.9	17.10	Cristobal, C. Z.	San Francisco, Cal.	Ballast.	3,667	2,329
Penrth	24	7.25	24	9.35	24	16.41	24	17.43	British.	464.6	60.0	21.0	New York, N. Y.	Hongkong, China.	General.	4,417	8,859
Castle 2.	24	11.50	24	12.00	24	19.10	24	20.10	American.	324.0	46.2	18.6	New Orleans, La.	Seattle, Wash.	Coke, general.	2,126	3,984
Point Fernin.	17	18.10	24	11.40	24	19.48	24	23.15	Colombian.	107.4	23.0	8.8	Cristobal, C. Z.	Bucaventura, Col.	General.	80	262
Cauca 2.	17	18.10	24	11.40	24	19.48	24	23.15	Colombian.	107.4	23.0	8.8	Cristobal, C. Z.	Bucaventura, Col.	General.	80	262
Poona 2.	24	12.05	24	14.25	24	21.00	25	00.11	Norwegian.	451.0	59.2	29.0	Rotterdam, Holl'd.	Los Angeles, Calif.	Ballast.	8,318	5,667
Pomona.	24	19.40	24	19.50	25	8.56	25	10.00	American.	430.0	56.0	18.0	Baltimore, Md.	Seattle, Wash.	Steel, general.	2,713	8,324
Pomona 2.	24	13.45	25	6.05	25	12.53	25	13.55	German.	318.0	53.0	15.0	Hamburg, Germany	San Antonio, Chile	General.	1,031	6,086
Anaus.	24	13.45	25	6.05	25	12.53	25	13.55	German.	318.0	53.0	15.0	Hamburg, Germany	San Antonio, Chile	General.	1,031	6,086
Annas.	24	13.45	25	6.05	25	12.53	25	13.55	German.	318.0	53.0	15.0	Hamburg, Germany	San Antonio, Chile	General.	1,031	6,086
Calli.	18	23.35	25	9.12	25	16.00	25	17.15	German.	426.0	59.0	21.0	Trieste, Italy	Guayaquil, Ecuador	General.	1,315	7,784
Bella 2.	24	19.30	25	10.55	25	17.32	25	20.00	Italian.	480.0	59.0	21.0	New York, N. Y.	Vancouver, B. C.	General.	1,315	7,784
Falduta 2.	25	12.30	25	12.55	25	19.29	25	21.55	American.	416.9	56.2	15.2	New York, N. Y.	Vancouver, B. C.	Ballast.	8,107	7,611
Balduta 2.	25	12.30	25	12.55	25	19.29	25	21.55	American.	416.9	56.2	15.2	New York, N. Y.	Vancouver, B. C.	Ballast.	8,107	7,611
Steel Murray.	25	13.45	25	13.55	25	22.25	26	4.18	American.	424.2	36.2	25.6	Galveston, Tex.	Calcutta, India.	Steel, general.	8,107	7,611
Baron Murray.	25	16.59	25	17.00	26	8.45	26	16.00	British.	332.0	48.0	25.9	Norfolk, Va.	Callao, Peru.	Ballast.	3,636	2,498

2 Motor ship.

3 Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Northern	19	00.45	19	6.00	19	15.45	19	15.45	American.	480.0	66.9	28.5	Los Angeles, Calif.	Chester, Pa.	Gasoline.	13,582	9,761
Sun 2.	19	00.45	19	6.00	19	15.45	19	15.45	American.	480.0	66.9	28.5	Los Angeles, Calif.	Chester, Pa.	Gasoline.	13,582	9,761
Christy Payne.	19	00.45	19	6.36	19	17.20	19	17.20	American.	463.3	60.2	27.0	New York, N. Y.	New York, N. Y.	Gasoline.	10,529	8,501
Willmott 7.	18	20.30	19	7.28	19	17.40	19	17.45	American.	390.0	54.2	23.0	Seattle, Wash.	Baltimore, Md.	Lumber, general.	6,500	6,162
Vulcan City.	18	00.30	19	7.50	19	18.20	19	18.20	British.	420.4	54.5	26.5	Seattle, Wash.	Cobh, Ireland 2	Wheat.	7,700	6,870
Langlectam.	17	22.30	19	8.17	19	19.25	19	20.30	British.	416.0	55.8	25.0	Vancouver, B. C.	Hampton Roads 2	Wheat.	8,565	6,671
Ville de	19	6.30	19	8.25	19	17.05	19	21.10	French.	411.0	53.8	25.0	Noumea, N. Caled.	Marseilles, France.	Copra, general.	3,844	7,077
Strasbourg.	19	6.30	19	8.25	19	17.05	19	21.10	French.	411.0	53.8	25.0	Noumea, N. Caled.	Marseilles, France.	Copra, general.	3,844	7,077
C. O.	19	15.25	19	16.15	20	15.50	20	15.50	British.	565.7	75.6	35.0	Talara, Peru.	Halifax, N. S.	Crude oil.	21,200	16,780
Florence	19	3.00	19	18.19	20	13.35	20	13.35	American.	401.8	52.2	24.0	Portland, Ore.	Mobile, Ala.	Lumber, general.	4,418	6,002
Charles Nelson.	20	5.05	20	6.55	20	16.00	20	16.00	American.	380.4	53.1	23.0	Seattle, Wash.	New York, N. Y.	Lumber, general.	6,213	5,659
Santa Clara.	20	16.45	20	17.28	20	15.05	21	15.05	Norwegian.	483.3	63.9	23.0	Arica, Chile	New York, N. Y.	General.	3,837	11,680
Kanta Nelson 7.	20	16.45	20	17.28	20	15.05	21	15.05	Norwegian.	483.3	63.9	23.0	Arica, Chile	New York, N. Y.	General.	3,837	11,680
St. Michael.	20	6.15	21	6.16	21	13.40	22	11.00	American.	448.0	56.2	28.2	Vancouver, B. C.	Oslo, Norway 2	Army supplies.	8,377	8,016
El Salvador.	20	6.15	21	6.35	21	14.40	22	9.30	American.	300.2	51.6	21.0	Balboa, C. Z.	New York, N. Y.	Coffee, general.	1,954	5,710
Indian 7.	20	14.38	21	7.11	21	15.45	21	15.45	Danish.	390.7	53.2	27.2	Vancouver, B. C.	Charlton, Eng.	Lumber, whitcat.	7,629	6,172
Virginian.	20	20.00	21	7.32	21	16.45	21	16.45	American.	490.5	58.2	26.2	Portland, Ore.	Boston, Mass.	General.	5,669	10,491
Dorothy	21	6.35	21	8.00	21	17.10	21	17.10	American.	448.9	60.2	31.0	Portland, Ore.	Boston, Mass.	Lumber, general.	10,000	9,294
San Gabriel.	21	11.40	21	12.27	21	20.05	22	1.08	American.	386.8	52.2	25.0	Port Alice, B. C.	Philadelphia, Pa.	Lumber, general.	7,000	5,110
Harry G.	21	16.15	21	17.30	21	10.55	22	10.55	American.	401.9	54.2	27.3	Geelong, Japan.	Hamburg, Germany	Naphtha.	14,648	11,646
Semino 7.	21	16.15	21	17.30	21	10.55	22	10.55	American.	401.9	54.2	27.3	Geelong, Japan.	Hamburg, Germany	Naphtha.	14,648	11,646
Jedmor 7.	21	14.45	21	18.13	22	11.40	22	11.40	British.	375.0	52.6	25.1	Portland, Ore.	Belfast, Ireland	Wheat.	7,260	6,972
K. R.	21	21.13	22	6.11	22	13.55	22	14.35	American.	440.0	58.2	28.1	Los Angeles, Calif.	Sewaren, N. J.	Gasoline.	7,450	6,050
Kingsbury 2.	21	21.13	22	6.11	22	13.55	22	14.35	American.	440.0	58.2	28.1	Los Angeles, Calif.	Sewaren, N. J.	Gasoline.	7,450	6,050

7 Motor ship.

8 For orders.

9 Lumber, grain, and general.

4 Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Salt		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Nature.	Tons.			Gross.	Net.		
Baldhill	21	23	00	22	6	39	22	14	55	American	Shell Eastern Pet. Co.	416.8	56	1	27	0	0	0	0
Mundines	22	11	45	22	12	28	22	19	56	American	Munson, McCork'k Line.	370.0	53	0	24	4	0	0	0
Pacific Spruce.	22	13	00	22	13	51	22	21	25	American	Dimon S. S. Corp.	410.5	54	0	25	0	0	0	0
Birmingham	22	17	25	22	18	25	22	12	10	American	Isthmian S. S. Lines	395.5	55	0	26	5	0	0	0
Suriname	22	12	05	23	6	20	23	13	15	American	United Fruit Co.	336.7	41	9	20	0	0	0	0
Portland	22	22	13	23	6	45	23	14	15	German	Hamburg-American Line	402.2	61	2	26	3	0	0	0
Barbara Cates.	22	23	59	23	7	22	23	16	20	American	Sudden & Christenson.	409.5	61	3	24	3	0	0	0
Wisconsin.	23	5	00	23	7	37	23	15	20	French	French Line	493.6	61	3	26	5	0	0	0
Barat.	23	11	15	23	11	55	23	18	30	Dutch	Royal Neth. S. S. Co.	202.9	33	1	12	5	0	0	0
Illinois	23	15	35	24	6	34	24	13	20	American	The Texas Co.	416.8	56	1	25	0	0	0	0
American	24	4	30	24	7	11	24	14	40	German	Amer.-Hawaiian Line	404.6	53	9	24	0	0	0	0
Albert Vogler	24	5	45	24	7	33	24	16	05	24	30	409.8	52	8	23	0	0	0	0
Caldas	23	24	45	24	7	50	24	15	45	Colombian.	National Navigation Co.	116.0	21	1	10	0	0	0	0
Baskoop	24	13	40	24	14	35	24	22	25	10	40	400.6	58	3	25	0	0	0	0
Cerro	24	16	50	24	17	28	25	11	30	German	Hamburg-American Line	227.2	34	4	14	2	0	0	0
Lieut. Col. H. C. Schumann	25	7	38	25	13	30	25	13	30	American	U. S. Army	393.2	54	3	27	0	0	0	0
Wicand	25	8	45	25	9	48	25	17	35	25	15	386.8	52	2	23	1	0	0	0
Point Salinas	25	9	15	25	10	05	25	17	35	25	17	461.9	60	6	25	0	0	0	0
Tai Shan	24	21	00	25	11	23	25	18	30	26	1	401.9	60	6	25	0	0	0	0
No. 4649	24	16	50	24	17	28	25	11	30	22	22	227.2	34	4	14	2	0	0	0

¹⁰ Motor ship. ¹¹ Tug. ¹² Kerosene and gasoline. ¹³ Sail boat.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Date.	Vessel.	ARRIVALS.		Date.	Vessel.	DEPARTURES.	
		From—	Line.			Line.	For—
July 19.	Tela	United Fruit Co.	Port Limon, Costa Rica.	July 19.	No. 9688 ¹⁴	Pan American Airways	San Salvador and wayp'gs.
July 19.	No. 145-M ¹⁴	Pan American Airways	Barranquilla, Colombia.	July 19.	No. 669-M ¹⁴	Pan American Airways	Miami via wayports.
July 19.	No. 608-M ¹⁴	Pan American Airways	Miami via wayports.	July 19.	No. 945-M ¹⁴	Pan American-Grace Airways	Telara via wayports.
July 20.	Perou.	French Line	St. Nazaire via wayports.	July 19.	Tela	United Fruit Co.	New Orleans, La.
July 21.	Pastores	United Fruit Co.	Santa Marta, Colombia.	July 19.	No. 145-M ¹⁴	Pan American Airways	Barranquilla, Colombia.
July 21.	Luzite	Maritime & Merc.	Cataguna, Colombia.	July 19.	Ancon	Panama R. R. S. S. Line	New York via Haiti.
July 21.	No. 945-M ¹⁴	Pan American-Grace Airways	Telara via wayports.	July 20.	Amelia ¹⁶	P. W. Hamilton	Colon, Rep. of Panama.

¹⁴ Air mail carrier. ¹⁵ Motor schooner. ¹⁶ Motor boat.

* Other than ships passing through the Canal.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
July 22	Stella Lykes	Lykes Brothers S. S. Co.	Lake Charles via wayp'ts.	July 21	Juan S. Eleano	Spanish S. S. Line.	Barcelona via wayports.
July 22	Metapan	United Fruit Co.	New York via Kingston.	July 22	Pastores	United Fruit Co.	New York via Kingston.
July 22	Iriona	United Fruit Co.	New Orleans, La.	July 22	No. 9670 ¹⁴	Pan American Airways	San Salvador and wayp'ts.
July 22	No. 6964 ¹⁴	Pan American Airways	San Salvador and wayp'ts.	July 22	No. 968-M ¹⁴	Pan American Airways	Miami via wayports.
July 22	No. 697-M ¹⁴	Pan American Airways	Miami via wayports.	July 22	Perou	French Line	Havre via wayports.
July 23	Baracoa	Colombian S. S. Line	New York, N. Y.	July 22	Stella Lykes	Lykes Brothers S. S. Co.	Galveston and wayports.
July 23	Inapaquina ¹⁶	A. Tagaropulos	Colon, Rep. of Panama.	July 23	No. 144-M ¹⁴	Pan American-Graec Airways	Pimental via wayports.
July 23	Anachucuma ¹⁶	A. Tagaropulos	Colon, Rep. of Panama.	July 23	Metapan	United Fruit Co.	Colombian ports.
July 24	Ulua	United Fruit Co.	New York via wayports.	July 23	Iriona	United Fruit Co.	Port Limon, Costa Rica.
July 24	Cefalu	Standard Fruit & S. S. Co.	New Orleans via Habana.	July 23	Inapaquina ¹⁶	A. Tagaropulos	Colon, Rep. of Panama.
July 24	Carmelita ¹⁵	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	July 23	Anachucuma ¹⁶	A. Tagaropulos	Colon, Rep. of Panama.
July 24	Amneta I. ¹⁵	P. W. Hamilton	Colon, Rep. of Panama.	July 24	Carmelita ¹⁵	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.
July 24	Amneta I. ¹⁵	United Fruit Co.	Port Limon, Costa Rica.	July 24	Baracoa	Colombian S. S. Line	New York via wayports.
July 25	Galicla	Hamburg-American Line	Tampico via wayports.	July 24	Ulua	United Fruit Co.	New York via wayports.
July 25	Colombia	Royal Netherlands S. S. Co.	Amsterdam via wayports.	July 25	Cefalu	Standard Fruit & S. S. Co.	New Orleans and wayp'ts.
July 25	No. 699-M ¹⁴	Pan American Airways	Miami via wayports.	July 25	Iriona	United Fruit Co.	New Orleans and wayp'ts.
July 25	No. 144-M ¹⁴	Pan American-Graec Airways	Pimental via wayports.	July 25	Amneta I. ¹⁵	P. W. Hamilton	Colon, Rep. of Panama.
July 25	No. 9670 ¹⁴	Pan American Airways	San Salvador and wayp'ts.				

PORT OF BALBOA.

July 22	Real ¹⁵	Hans Elliott.	Panama Bay, R. P.	July 23	Real ¹⁵	Hans Elliott.	Panama Bay, R. P.
July 23	White Shadow ^{17 18}	E. H. Norton.	Sea.	July 25	White Shadow ^{17 18}	E. H. Norton.	Panama Bay, R. P.

¹⁷ Motor ship. ¹⁸ Yacht. ¹⁵ Other than ships passing through the Canal.

Police Canvass of Civil Population of Canal Zone.

The annual house-to-house canvass of the civil population of the Canal Zone taken by the Police and Fire Division during the month of June, 1931, resulted in a count of 30,745 as the total number of civilian inhabitants. This was an increase of 445 over the last canvass taken, in June, 1929. The canvass was omitted in 1930, due to the fact that the fifteenth census of the United States, taken in that year, included the Canal Zone.

The Balboa district showed an increase of 1,397, which was accounted for by Balboa, La Boca, and Las Cascadas rural district on west side of Canal.

The Cristobal district showed a decrease of 889 from the previous canvass, the decrease having occurred in the rural districts.

There was a decrease of 394 employees residing in the Canal Zone.

The population, as of June, 1931, was distributed as follows:

	Americans.					All others.					Total.
	Total men.	Em- ployees.	Total women.	Em- ployees.	Child- ren.	Total men.	Em- ployees.	Total women.	Em- ployees.	Child- ren.	
Balboa district.....	2,200	1,886	2,146	371	2,095	4,097	2,807	2,699	77	5,352	18,589
Cristobal district.....	499	416	658	29	727	3,449	2,334	2,111	148	4,600	12,044
Prisoners.....	12					98		2			112
Total employees..		2,302		400			5,141		225		8,068
Total inhabitants..	2,711		2,804		2,822	7,644		4,812		9,952	30,745

* Includes 373 civilian employees of the Army and Navy.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 28, 1931.

No. 914.

Panama Canal, Pacific entrance, range light temporarily discontinued.—Rear range light No. 4, southbound, in the Pacific entrance of the Panama Canal, has been temporarily discontinued due to damage to the transmission line. It will be reestablished as soon as the necessary repairs can be accomplished.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 29, 1931.

No. 915.

Caribbean Sea, Old Providence Island Light reported not burning.—The following radio message was received at 1.16 a. m., from the S. S. *Tela*:

Old Providence Island Light was not burning on the night of July 28-29, 1931.

Approximate position: Latitude 13° 19' 20" N., longitude 81° 23' 18" W. (Signed) S. S. *Tela*.

H. BURGESS,
Governor.

Coal.

Coal, bunker, Navy Standard, is supplied to steamships, including warships of all nations, trimmed in bunkers at \$7.25 at Cristobal and \$10.25 at Balboa per ton of 2,240 pounds. Extra charges are made in accordance with a published tariff for special trimming at the request of the officers of the ship, for galley, lump or run-of-mine coal in sacks, and for delivery, when coal is furnished from lighters or launches away from the coaling piers.

Coal can be bunkered by bunkering machines at any rate up to 1,500 tons per hour, regulated by the amount of necessary trimming.

Coal for cargo is sold at prices quoted on application and on authorization of the Governor.

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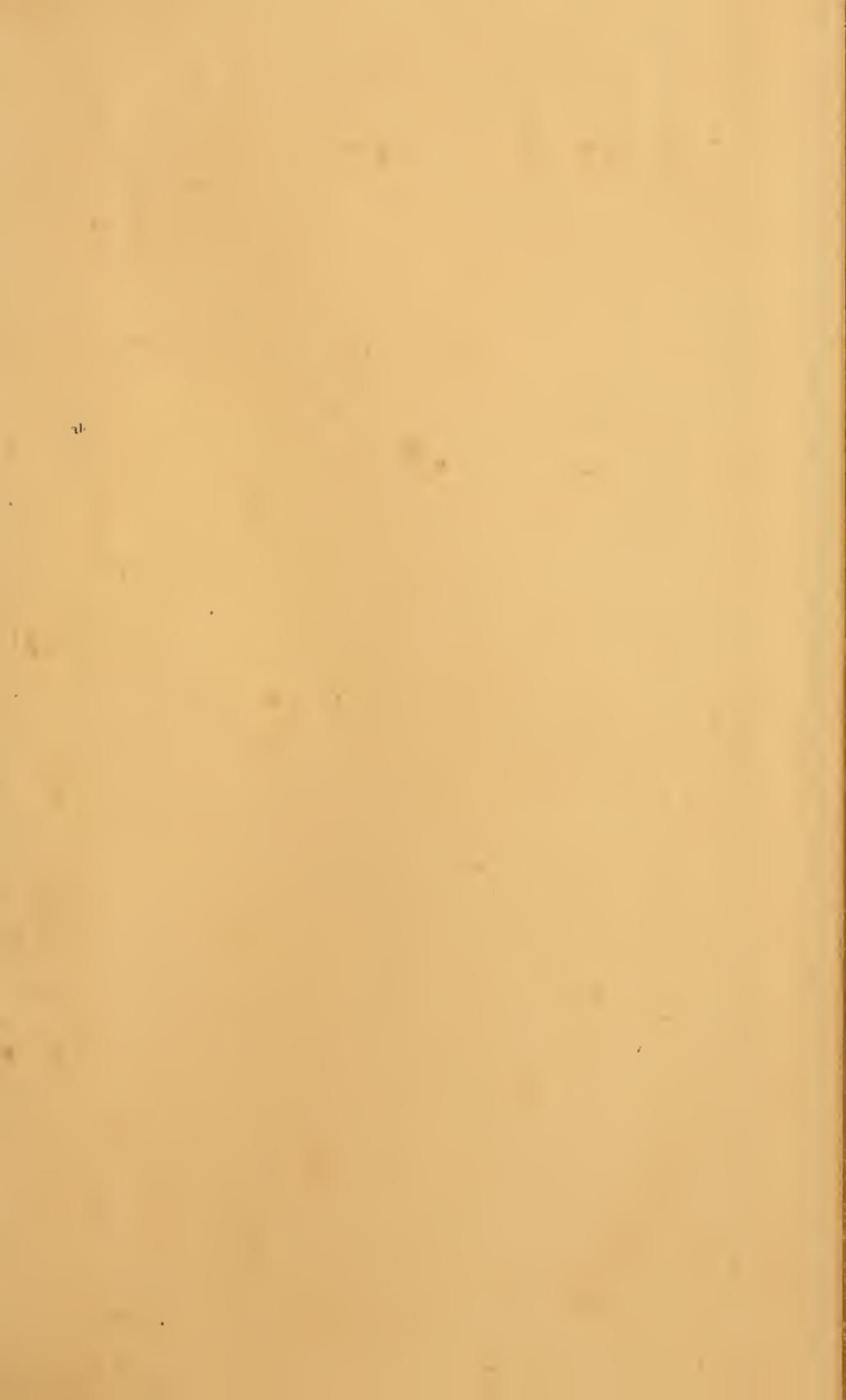
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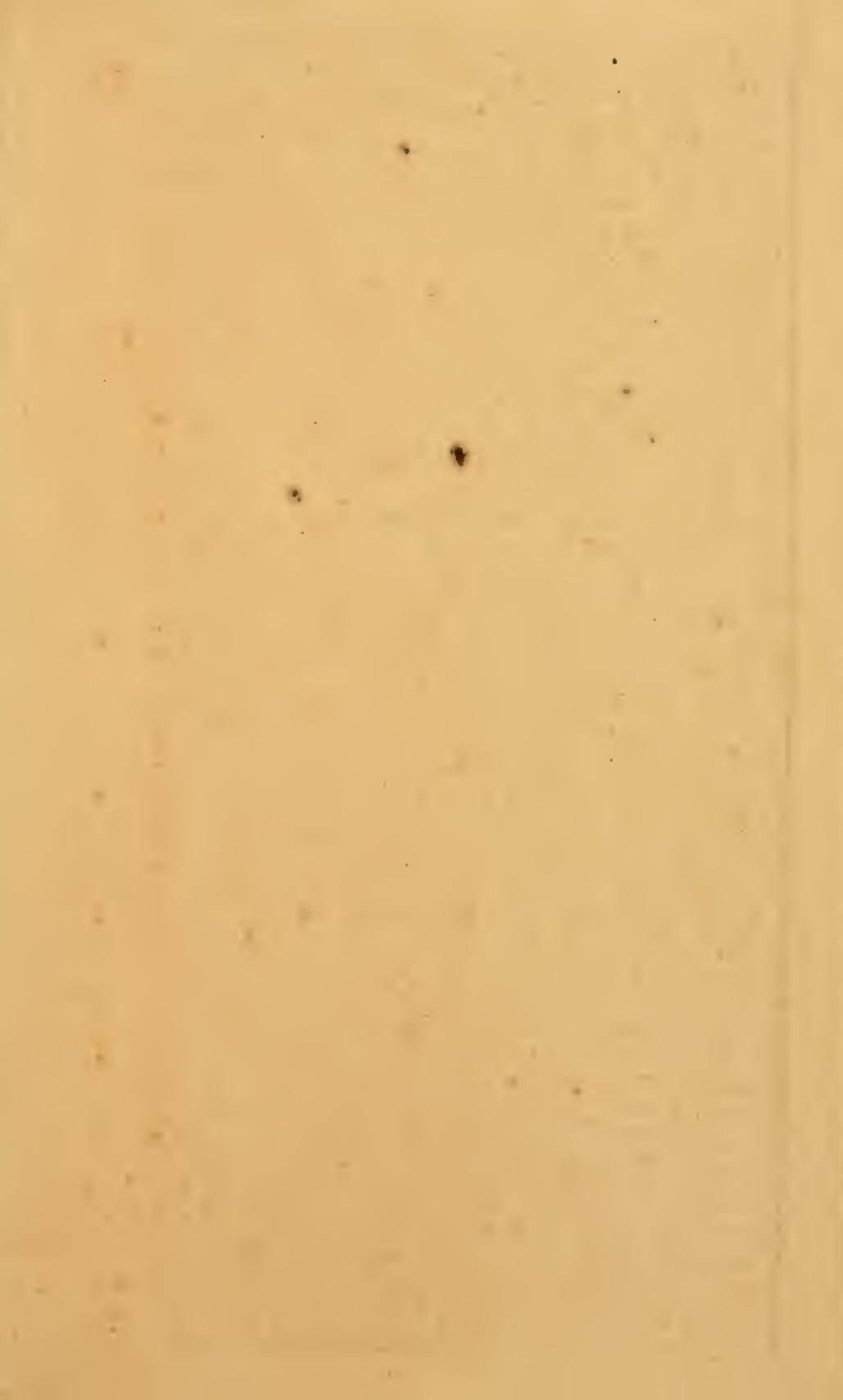
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